



BADGER STATE Smoke Signals

Serving Amateur Radio in Wisconsin



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Outstanding Brass Players



A TALE OF TWO TOOTERS: Paul Amend, KA9OBP, of Portage (right), and Mark Bingham practice before a music competition held recently in Sauk City. A quartet, of which these two are one half, won their competition, as did the jazz ensemble in which they play. They will be competing at the state level in Madison in May. Paul is

in 11th grade at Portage Senior High School. When Paul's not playing brass in this form, he can be found using brass of another kind to send some mean QRQ CW on WIN. (And International or American, too!)

- Photo courtesy of Erin Doege,
Baraboo News Republic

ARRL/VEC Streamlined

After comprehensive study, the ARRL Volunteer Resources Committee (VRC) and staff have outlined a plan to streamline the ARRL/VEC and improve the service and support given to its Volunteer Examiners. Some of the enhancements have already been implemented.

Field stocking of exam materials is now being tested among thirteen of the most active Volunteer Examiner Teams (VET) who have established a history of regularly scheduled testing and who have demonstrated their reliability over a period of at least one year. Test materials, which have been sent to these VETs in sufficient quantities to last about six months, will be replenished as needed.

Once the results of the field-stocking pilot test are in and any necessary fine tuning is accomplished, field stocking will be opened to other ARRL/VEC VE Teams with a record of regularly scheduled sessions. This will permit them to rotate exam elements periodically as needed, and will help to eliminate last-minute emergencies.

(Please turn to page 9)

FCC Accepts Late 87-14 Filing by UPS

Just at press time, we (The ARRL Letter), received notification that the FCC had accepted the six-months late UPS comments on Docket 87-14. The FCC will accept reply comments until March 31.

For a copy of the UPS comments, please send an SASE with \$1.41 postage to: Regulatory Information Branch, ARRL Headquarters, 225 Main Street, Newington, CT 06111.

(From The ARRL Letter)

For more information on Docket 87-14, including the late filing by the United Parcel Service (UPS), and a letter written by Wisconsin Section Manager Rich Regent to his representative in Congress asking his help in 87-14, please see page 10 of this issue of Badger State Smoke Signals.

The assaults on 220-222 MHz continue; the ARRL has committed itself to doing all it can to save it. There is no current indication when the FCC might act.

ON THE INSIDE

| | |
|---------------------------------------|----|
| The Test Point | 3 |
| Wisconsin Nets Association | 4 |
| Kyle Sails into the Sunset | 5 |
| Riverland Amateur Radio Club | 6 |
| John's Junk Box | 8 |
| Is there Life Below 80 Meters? | 9 |
| Upgrade Math Rough? Read This! | 11 |
| Eau Claire Amateur Radio Club | 12 |
| Communication in the Marshall Islands | 14 |
| Only 19 hams in Wisconsin? | 15 |
| From the Editor | 15 |
| The Wisconsin Packeteer | 16 |
| Yellow Thunder Amateur Radio Club | 19 |

BADGER STATE Smoke Signals

Serving Amateur Radio in Wisconsin

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SUBSCRIPTIONS

| | | |
|---------|-------------|---------|
| 1 year | (12 issues) | \$7.50 |
| 2 years | (24 issues) | \$14.00 |
| 3 years | (36 issues) | \$20.00 |

ADDRESS CHANGES AND CORRECTIONS should be sent to Kenneth A. Ebner, address above.

EDITORIAL MATERIAL, PHOTOGRAPHS, FEATURE ARTICLES, AND EXCHANGE PAPERS should be sent to Jim Romelfanger, address above.

DISPLAY ADS OR INQUIRIES REGARDING DISPLAY ADS should be directed to Harry Westlund, address above.

SUBSCRIPTIONS should be sent, with check or money order (do not send cash), to Jim Decker, address above.

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EDITORIAL DISCLAIMER

The opinions expressed in editorials, guest editorials, columns, articles, and letters are the opinions of the authors only, and do not, unless otherwise stated, express or imply agreement or endorsement by Badger State Smoke Signals, or any other organization.

Swapfests and other Social Events

Saturday, April 9, 1988. Rochester Area Hamfest at John Adams Junior High School, 1525 N.W. 31st St., Rochester, MN. Admission, \$3.00 advance, or \$4.00 at the door. Tables, \$8.00. License examinations, Friday 7:00 pm. Exam registrator, Friday 5:30 pm to 6:03 pm. Contact: R.A.R.C. c/o WBØYEE - HQ, 2253 Nordic Ct. NW, Rochester, MN 55901. All tickets will be held and can be picked up at the door.)

SUNDAY, April 10, 1988. 16th Annual Madison Swapfest. Sponsored by Madison Area Repeater Association. Dane County Expo Center, Forum Bldg. Admission: \$2.75 advance, \$3.00 at door.

Tables: \$7.00 advance, \$8.00 at door. Contact: MARA, Box 3403 Madison, WI 53704. (608) 274-5153. See last months BSSS for ad with more details and map from this Badger State Booster.

APRIL 29 - MAY 1 - DAYTON HAMVENTION. This is the largest hamfest in the world. See QST and other publications, or SASE to Box 2205, Dayton, Ohio, 45401.

SATURDAY, MAY 7, 1988. Tenth Annual Cedarburg, WI Swapfest. Sponsored by the Ozaukee Radio Club. Circle B Recreation Center, Intersection of Highway 60 and County I. Amateur Radio Examinations (see test point). Admission: \$2.00 advance, \$3.00 at the door. Tables: \$3.00. SASE to O.R.C. Swapfest committee, 101 East Clay St, Saukville, WI 53080.

SATURDAY MAY 15, 1988. Tri-County Hamfest (Sheboygan, Manitowoc & Calumet Clys.) Manitowoc County Expo, Intersection of hwy 42-151 and I43 on County Hwy R. Follow signs to center. Amateur Radio Examinations given (see Test Point). Admission: \$2.00 advance, \$3.00 at the door. Tables: \$3.00. SASE to Mancorad Radio Club, P.O. Box 204, Manitowoc, WI 54220. See last months BSSS for ad with more details and map.

SATURDAY, JULY 9, 1988. Swapfest "88". American Legion Post 434, Oak Creek, WI. Sponsored by the South Milwaukee ARC. Amateur Radio Examinations given (see test point). Tickets: \$3.00. Watch BSSS for ad with more details and map from this Badger State Booster.

As a service to our readers, this section of Badger State Smoke Signals is available without charge to list your upcoming Swapfest, Hamfest, dinner, picnic, party or other event of interest to Radio Amateurs in Wisconsin and nearby areas.

Send information on your event to Kenneth A. Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901. In addition, space is available at attractive rates on our advertising pages. For information on rates and requirements for our advertising pages, please contact K9ZZ or K9EN.

Club Meetings

BADGER AMATEUR RADIO SOCIETY
(W9YT - UNIVERSITY OF WISCONSIN - MADISON)
Monthly while school in session - 2nd Wednesday - 7:30 p.m. - 8-314, Electrical Engineering Building.

CENTRAL WISCONSIN RADIO AMATEURS, LTD.
(STEVENS POINT)
Second Wednesday.

EAU CLAIRE AMATEUR RADIO CLUB
2nd Tuesday - 7:30 p.m. - Parks and Recreation Bldg., Oxford and 1st Streets, Eau Claire. Hams, guests welcome. Travelers welcome on wide area club repeater K9UXP, 146.31/91.

FOUR LAKES AMATEUR RADIO CLUB (MADISON WI)
First and third Tuesdays - 7:30 p.m. - Red Cross Bldg., 4860 Sheboygan Ave.

FOX CITIES AMATEUR RADIO CLUB
Third Monday - 7:00 p.m. - Roosevelt Jr. High School, 318 E. Brewster St., Appleton. Info: (414) 735-6294. Winter Banquet, January 23, 1988. Contact KA9MPP.

GREEN BAY MIKE AND KEY CLUB
Second Thursday - Red Cross Bldg., corner Danz and Deckner, Green Bay.

GREEN FOX AMATEUR RADIO CLUB
Third Monday - 7:30 p.m. - Green Lake Town Hall, int. of county hwy. K and N.

KETTLE MORaine RADIO AMATEURS
Second Friday.

MANITOWOC COUNTY RADIO AMATEURS
First Wednesday - 7:00 p.m. - City Hall, 817 Franklin St., Manitowoc.
Second Wednesday - Red Cross Building, 1816 Washington St., Manitowoc.

MENOMONEE FALLS AMATEUR RADIO CLUB
Last Tuesday - Doors open 7:30 p.m., meeting begins 8:00 p.m. - Security Savings and Loan, Menomonee Falls. Amateurs and guests welcome.

MILWAUKEE RADIO AMATEURS CLUB
Second Thursday - Wauwatosa Savings and Loan, 7500 W. State St.

OZAUKEE RADIO CLUB
Second Wednesday - 7:30 p.m. - Saukville Community Center.

RIVERLAND AMATEUR RADIO CLUB
First Tuesday - 7:30 p.m. - Onalaska Community Center, Onalaska WI.

ROCK RIVER RADIO CLUB
First Tuesday - 8:00 p.m. - Dodge County Sheriff's Dep't, 141 N. Main, Juneau WI.

SHEBOYGAN COUNTY AMATEUR RADIO CLUB
Second Tuesday - 7:00 p.m. - Sheboygan Red Cross/Boy Scout Bldg., 2032 Erie Ave.

SOUTHEAST WISCONSIN CHAPTER #162 QCWA
Meets third Monday monthly, 7:30 p.m., Around the Clock Restaurant, 3012 Rapids, Drive, Racine.

SOUTH MILWAUKEE AMATEUR RADIO CLUB
First Wednesday - Legion Post 434, Shepard Ave., Oak Creek WI. Auctions in March and October.

TRI-COUNTY AMATEUR RADIO CLUB
Meetings are held at 7:00 p.m., the second Sunday of each month at the Trinity Lutheran Church, 314 Barrie, Fort Atkinson, WI.

WEST ALLIS RADIO AMATEURS CLUB
Second Tuesday - 8:00 p.m. - St. Francis Savings, 9330 W. Greenfield Ave.

WISCONSIN VALLEY RADIO ASSOCIATION (WAUSAU)
First Tuesday - 7:30 p.m. - Location varies; info on 146.04/64, Wausau.

YELLOW THUNDER AMATEUR RADIO CLUB (BARABOO)
Days rotate: 1988 meeting dates: Thu., Apr. 14, Mon., May 16, Tue., Jun. 14, Wed., Jul. 13, Thu., Aug 11, Mon., Sep. 19, Tue., Oct. 11, Wed., Nov. 16, Thu., Dec. 15. Monday meetings in room 10 of the Baraboo Civic Center; all others in room 25. Meetings start 7:30 p.m.

Let Badger State Smoke Signals know your club's meeting dates, and we will let our readers know of your meetings and activities.

The TEST POINT



The following are known locations where Amateur Radio license examinations are scheduled in the Badger State area.

| | |
|---------------------|--------------------------|
| April 7, 1988 | Rochester, MN |
| April 9, 1988 | Madison, WI |
| April 16, 1988 | Milwaukee, WI (BE) |
| April 16, 1988 | Milwaukee, WI (MRAC) |
| April 16, 1988 | Eau Claire, WI |
| May 7, 1988 | Cedarburg, WI (BE) |
| May 14, 1988 | Manitowoc, WI |
| May 14, 1988 | Rhineland, WI |
| May 21, 1988 | Milwaukee, WI (MRAC) |
| June 16, 1988 | Onalaska, WI |
| June 18, 1988 | Menomonie, WI |
| June 19, 1988 | Stevens Point, WI |
| July 8, 1988 | Eau Claire, WI |
| July 9, 1988 | South Milwaukee, WI (BE) |
| July 9, 1988 | Eau Claire, WI |
| August 13, 1988 | Rhineland, WI |
| September 24, 1988 | Wisconsin Rapids, WI |
| October 15, 1988 | Eau Claire, WI |
| November 12, 1988 | Menomonie, WI |
| November 12, 1988 | Rhineland, WI |
| December 3, 1988 | Stevens Point, WI |
| March 18, 1989 | Menomonie, WI |
| June 17, 1989 | Menomonie, WI |
| November 11, 1989 | Menomonie, WI |
| Monthly, First Sat. | Racine, WI |
| Monthly, Third Sat. | Loves Park, IL |

GENERAL RULES FOR MOST EXAMINATIONS:

Most examinations require filing an FCC Form 610 and advance registration at least 30 days before the exam date. (Some VECs permit walk-ins. Check with sponsor.)

To register, you must first secure a copy of the current FCC Form 610 and fill it out completely (AND CORRECTLY). Get your form from an FCC Field Office, the ARRL or Badger State Smoke Signals. Send a 22¢ SASE if you request one from the ARRL or BSSS. In most cases, forms can also be obtained from the sponsoring group.

ARRL/VEC examinations require a check for \$4.55 payable to "ARRL/VEC".

The FCC now requires applicants to show their original Amateur license to the VEC. A copy of your license must be attached to your FCC form 610. You will also be required to have a photo ID, or other acceptable identification.

Technician class licensees must show proof of testing before March 21, 1987, in order to upgrade to General with a code test only.

Additional information is given below.

MILWAUKEE METRO AREA TEST TEAM - MRAC/VEC (MRAC)

April 16, 1988 - May 21, 1988

Tests are given at 9:00 AM in room 256, Wauwatosa East High School at 74th and Milwaukee Ave. Use the east (74th St.) entrance.

Bring your original license and 3 good photocopies, a pen, and \$4.55 for the exam fee. Walk-ins accommodated if time permits.

Register in advance on a Postal Service 14 cent postcard; print the grade of license you are applying for, your name, address, and telephone number. Send to: The Milwaukee Radio Amateurs' Club, Inc., N50 W16328 Pin Oak Court, Menomonee Falls WI 53051.

BADGER EXAMINERS (BE) - MILWAUKEE

April 16

May 7 (at Ozaukee Club Swapfest in Cedarburg - 9:00 a.m.)

July 9 (South Milwaukee Swapfest)

Unless otherwise noted, examinations are administered from 1 to 4 p.m. at St. Nicholas Parish, 5353 N. Green Bay Ave. (2 1/2 blocks south of Silver Spring), Milwaukee. Bring your original license, a good photocopy of it, and a second form of ID. Walk-ins are welcome. Technician license holders must bring proof of testing prior to March 21, 1987 to upgrade to General with code test only. Advance registration: send post card with your name, test or tests you wish to take, date you wish to be tested, your call sign, address and phone number to Badger Examiners, Mickey Dolgin, KB9G, 507 E. Spooner Rd., Fox Point WI 53217 (414) 351-5311.

APPLETON, WI

Contact: Larry Siebers, KD9IA, 7077 Weyers Rd., Freedom, WI 54130. (414) 788-3823

MANITOWOC, WI

April 14 - Hamfest

Contact: Mancorad Radio Club, P.O. Box 204, Manitowoc, WI 54220.

ONALASKA, WI

Thursday, June 16, 1988

Both exams will be at the Onalaska Community Center, 515 Quincy Street, Onalaska, WI 54601. Reservation recommended. Contact Rick Williams, KV9U, 524 Troy Street, Onalaska, WI 54650, phone (608) 783-8028. Walk-ins accepted but no guarantee of exam availability.

STEVENS POINT, Wisconsin

June 19 and December 3, 1988

By Central Wisconsin Radio Amateurs, Ltd. Contact Joseph W. Larson, N9JW, 644 Portage St., Stevens Point, WI 54481. (715) 344-1182.

WISCONSIN RAPIDS, WI - ARRL/VEC

September 24, 1988

Contact Eugene R. Santoski, K9UTQ, 1220 18th Street South, Wisconsin Rapids, WI 54494. (715) 423-6368.

EAU CLAIRE, WI - W5YI/VEC

9:00 A.M. to Noon, except July 8, 1988, 6:00 P.M. to 9:00 P.M. Exams are given at the University of Wisconsin Facilities Management Building in Eau Claire, except that the July exams are given in conjunction with the Eau Claire Amateur Radio Hamfest. There is no pre-registration requirement. Contact: Carl Searing, W9NW, 1129 McKinley Road, Eau Claire, WI 54703. (715) 834-1303.

MENOMONIE, WI

Credit Union Office Building, Conference Room, lower level, 444 S. Broadway, Menomonie, WI. Contact: Dr. Thomas W. King, KD9TT, c/o office, 444 S. Broadway, Suite 1, Menomonie, WI 54751. (715) 235-4747 (O), 235-5757 (H).

MADISON, WISCONSIN

Four Lakes ARC (ARRL/VEC)

April 9, 1988

Fire Station #2, at 421 Grand Canyon Dr. They start at 8:00 a.m. sharp.

RHINELANDER, WISCONSIN

May, 14, 1988

August 13, 1988 (Rhineland Swapfest)

November 12, 1988.

All except August will be held at Nicolet College Science Center in the Fireside Room starting at 9:00 a.m. All sessions held at Nicolet College will be by appointment only. Registration required thirty days in advance of testing session, with check payable to "DeVry VEC" for \$4.55. Only Technician class and above will be given at the testing sessions.

August 13th testing session will be conducted at the Rhineland Swapfest, corner of Chippewa Dr. and Co. Hwy. CC in the Rhineland Ice Association Ice Arena. Walk-ins will be accepted at the swapfest. Registration on the hour from 9:00 a.m. till 12:00 noon.

Novice tests will be given by appointment at any time except at regular scheduled testing sessions.

Contact: Leonard Bauman St., K9RMN, 1312 Dorothy St., Rhineland, WI 54501. (715) 369-3296.

RACINE, WISCONSIN - ARRL/VEC

First Saturday of each month except during summer and the Christmas holidays.

Exams are given at the Red Cross Building, 4521 Taylor Ave., Racine, WI. Walk-ins are permitted.

Send pre-registration to: William R. Firchol, Jr., N9DMP, 1912 27th Street, Kenosha WI 53140.

Third Saturday of every month.

Northern Illinois Volunteer Examiners (DeVry VEC). Held at North Suburban Library on North Second Street in Loves Park, IL. Contact: Gene Melton, AK9N, 2901 Billie Rd., Rockford, IL 61109, (815) 874-6867

Minnesota Tests. Contact:

Amateur Radio Association of Bloomington, Art Putt, 881-7187.

St. Paul Radio Club, Jay Bellows, 222-7253. Rochester, MN. RARC VE team (ARRL/VEC). Contact Bob, KØSIR, evenings at (507) 282-8057.

This section of Badger State Smoke Signals is available to publicize your Volunteer Examiner Amateur Radio license examination schedules.

Please send us your schedules of dates, times, and locations that you will be conducting examinations and we will include the information here. Be sure to include contact address and any other necessary requirements. Information should be sent to K9EN or K9ZZ at the address shown on page 2.

Steve, WB9ZRE, measured the power that his shack consumes when all the gear is fired up. Would you believe 77 Amps??!! Looks like a 5th 20 amp line will have to go in before too long. Hmmm.... The service into the house is 100 Amps. With the appliances, etc., that leaves just enough to power a 15 Watt light bulb for illumination... No problem! Now where is the public utility stock? --from FOXTALES, Green Fox ARC

1988 officers for the Taylor County ARC are: President, W9LEE, Secretary, N9FZD, and Treasurer, WD9FWP.

Wisconsin Nets Association Ltd.

WISCONSIN NETS

| NET | WNA | FREQ | UTC | CDT | MANAGER |
|--------|-----|-------|-------|------|---------|
| BWN | YES | 3984 | 1100Z | 0600 | WD9IID |
| BEN | YES | 3985 | 1700Z | 1200 | KA9RII |
| WSBN | YES | 3985 | 2230Z | 1730 | WB9ESM |
| WNN | YES | 3723 | 2300Z | 1800 | N9DGL |
| WSSN | YES | 3645 | 2330Z | 1830 | N9BDL |
| WIN-E | YES | 3662 | 0000Z | 1900 | WB9ICH |
| WIN-L | YES | 3662 | 0300Z | 2200 | KC9CJ |
| NWTN | YES | 34/94 | 2330Z | 1830 | KA9VII |
| GR.BAY | NO | 72/12 | 0145Z | 2045 | WB9NRK |
| | | | THU. | WED. | |

RACES NO 3993.5 1715Z 1215 WC9AAG
USB TUE. & THUR.
RACES NO 3993.5 1300Z 0800 WA9OAY
LSB SUN.

Section Manager's notes



Richard R. Regent, K9GDF
5003 South 26th Street
Milwaukee, WI 53221

Ozaukee Radio Club will hold its ARRL sanctioned Swapfest May 7th starting at 8 a.m. at the Circle B Recreation Center, Highway 60 and County I, north of Cedarburg, with walk-in exams beginning at 9 a.m. given by Badger Examiners.

May 14th, Tri-County Hamfest sponsored by MANCORAD, Sheboygan 220 Repeater Club, and Calumet County RC, starting at 8 a.m. at the Manitowoc County Expo, Highways 42, 151 and I-43 on County Highway R. Exams by ARRL VE Team will be available.

Bicentennial Special Event Week is May 14th through 20th in Wisconsin with several clubs authorized to use special 200 call signs. Listen for W200JZ, NB200C, WB200QFW, NK200B, AJ200U, K200MMV, and WB200JNY.

Sheboygan County ARC officers: Pres. NI9Z (also voted as Ham of the Year); V. Pres. WB9QCY; Sec. KC9EZ; Treas. WA9SNU; Board Member W9RF; and Novice Rep. KA9YQU.

West Allis RAC is offering some excellent scholarships, write to WA9POV for details.

KJ9I has 128 countries on 160 meters.

Two-meter grid square activity now shows K9VGE at 138 grids, with W9YCV at 127.

KA9VII is new Net Manager for the North Woods Traffic Net.

(Editor's Note: The Tri-County Hamfest listed for May 14th in Manitowoc is NOT the same event as the long-established Tri-County Hamfest, held March 27 in Jefferson, Wisconsin, and sponsored by the Tri-County Amateur Radio Club.)

Middle age is when your memory is shorter, your experiences longer, your stamina lower, and your forehead higher.

Due to space limitations, the following has been presented in two installments. Part I was presented last month, Part II follows.

Gene Santoski, K9UTQ
Section Traffic Manager
Wisconsin Section ARRL
1220 18th St. So.
Wisconsin Rapids, WI 54494

UNIVERSAL TRAFFIC QUERIES WHO OWNS THE FREQUENCY?

No one "owns" a frequency or has exclusive rights to it. Just because a net has a net scheduled on a certain frequency at a certain time does not give it rights to the frequency. At net callup time, if the frequency is in use, the NCS should break in a politely ask the stations to move to another frequency and explain why. If they refuse to move the NCS should move the net to a nearby quiet frequency. Remember, the net is where the NCS is. If the band is crowded which is often the case on 75 meter phone in the Winter months, the NCS will just have to squeeze in somewhere near the normal net frequency and take his chances of have the net cause QRM and being QRMd. Net frequencies listed in the directories should be considered approximate.

WHAT KIND OF TRAFFIC IS PERMISSABLE ON AMATEUR CIRCUITS?

Section 97.114 of the FCC Rules clearly specifies which traffic is allowable to handle.

The transmission or delivery of the following third-party traffic is prohibited:

1. International third-party traffic except with countries which have consented thereto;
 2. Third-party traffic involving material compensation either tangible or intangible, direct or indirect to a third party, a station licensee, a control operator or any other person;
 3. Except for an emergency communications as defined in this part, third-party traffic consisting of business communications on behalf of any party.
- c. The licensee of an amateur radio station may not permit any person to participate in traffic from that station as a third party if:

1. The control operator is not present at the control point and is not continuously monitoring and supervising the third-party participation to ensure compliance with the rules;
2. The third party is a prior amateur radio licensee whose license was revoked; suspended for less than the balance of the license term and the suspension is still in effect; suspended for the balance of the license and relicensing has not taken place; surrendered for cancellation following notice of revocation, suspension or monetary forfeiture proceedings; or who is the subject of a cease and desist order which relates to amateur operation and which is still in effect.

Every amateur should be familiar with these rules. A third party message is one the control operator (first party) of your station sends to another station (second party) for anyone else (third party). Third-party messages include those that are spoken, written, eystroked, keyed, photographed or otherwise originated by or for a third party, and transmitted by your Amateur Radio station live or delayed.

A special legal agreement is required in each country to make such traffic permissible, both internally and externally. A list of third-party agreements currently in effect can be found in the current FCC Rule Book or QST Magazine.

Till next month, CU on the nets es 73
Gene K9UTQ - Wisconsin STM/ARRL

MINUTES FROM THE WISCONSIN NETS ASSOCIATION LIMITED MEETING OF DECEMBER 12, 1987

The quarterly on the air meeting of the Wisconsin Nets Association Ltd. was called to order on 3985 KHz at 1:00 p.m., Saturday, December 12th, by Chairman N9GJI, Bob Dunn.

A roll call of officers and members was read with the following amateurs present:

| | | | |
|--------|----------------|--------|----------------|
| NC9G | WNA Treasurer | N9DGL | WNA Secretary |
| K9UTQ | Sec. Tfc. Mgr. | WB9YPY | BWN Delegate |
| KA9RII | BEN Mgr. | WB9ESM | WSBN Delegate |
| W9ODV | BEN Delegate | WB9JSW | BEN Delegate |
| K9ANV | WSBN Manager | K9FHI | WSBN Delegate |
| N9BDL | WSSN Manager | N9FVN | WSBN Delegate |
| WB9ICH | WIN/E Manager | W9CBE | WIN/E Delegate |
| W9NCP | WIN/L Manager | KY9R | WSSN Delegate |

Non-members present were: KA9VII, KA9USV, and NK9L.

Minutes of the September 12th, 1987 meeting were read and, without discussion, a motion was made by N9BDL and seconded by KA9RII to approve the minutes as read. Motion passed.

Treasurer's report was read by Treasurer NC9G.

Balance as of the Sept. 12, 1987 meeting: \$306.95

Receipts

| | |
|---------------------------------|--------|
| September 1987 picnic | 80.00 |
| WNA Boosters | 118.00 |
| Refund check for service charge | 12.50 |

Disbursements

| | |
|-------------------------|-------|
| B.S.S.S. | 65.00 |
| Award plaques | 26.08 |
| Picnic expenses | 82.66 |
| Postage (minutes twice) | 8.80 |
| Service charge | 3.50 |

Present balance as of 12/12/87 \$331.41

OLD BUSINESS: The matter of a service charge being charged on our checking account was looked into by NC9G. Art wrote them a letter stating that we are a non-profit organization and that we should not have these charges. They indicated they will not charge us a service charge in the future and will credit us for the recent service charges. Inx Art!

OLD BUSINESS: Location of the 1988 Meeting/Picnic: K9UTQ stated as soon as he can register, he will get us set up at either of the Wood County Parks, preferably the North Park.

(continued on page 18)

Kyle Sails into the Sunset

By Richard R. Regent, K9GDF
5003 South 26th Street
Milwaukee, WI 53221

Throwing his sails to the wind this July, Kyle Jeske, WA9USD, will be leaving Port Washington, Wisconsin on a solo sailboat jaunt via the Mississippi River to take up residence in Florida. The thrill of going places and doing things is evident in Kyle's voice as he lists the stops, "Along the Lake Michigan shores by Port Washington, Milwaukee at South Shore, Racine, Kenosha, and Chicago. Then on the Illinois River for 1 1/2 months toward the Mississippi."

His sailboat, Solitaire, is aptly named for the solo venture. Kyle lets us in on a secret, "One meaning of Solitaire that I like is 'a jewel set by itself.'" The sleek 22-foot sailboat with its white sails glistening in the sun has a cabin full of creature comforts: bed, range, microwave, porta potty, and ham radio station. "I'll be operating WA9USD/MM, Marine Mobile." Kyle is careful to distinguish between marine and maritime, "Marine Mobile is what I'll be doing, Maritime Mobile is used when operating in international waters."

Acting a bit like nut-and-berry-eating Ewell Gibbons, Kyle talks of fishing, foraging and possibly hunting for food along the way. "Running the boat aground in shallow waters and getting fishing licenses are the worst problems I expect will happen," he thoughtfully remarks. "I sure don't want to get stuck on a sand bar. But a certain threat are those fishing license applications and rules for transients, they're different in each state." And with extra emphasis, he adds, "It's ridiculous," and laughs.

"I'll be staying in St. Louis around one week. Then sailing through Arkansas from September to October, unfortunately just in time for possible hurricane weather. New Orleans will be a delicious and nutritious place to fill up on some tasty Cajun food, specialties for which they are famous, besides being a welcome change from foraging and cooking on my own.



Then around November to December, just as the Wisconsin snow falls, I'll be anchored in the picturesque sparkling green waters of the Florida Keys, basking in the hot sunshine and playing songs on my fiddle." "But," Kyle quickly adds, "I don't sing."

Kyle will also be fiddling around with Ham Radio on the Solitaire: HF to 2 meter rigs powered by solar cells, batteries, or generator, depending on conditions. Planned activities include working 3,985 and 14,313 KHz, MIDCARS, the County Hunter's Net, and the Ol' Miss Net. WA9USD says he likes the phonetics "Ugly Sea Dog."

You'll recall that WA9USD was President of the Ozaukee Radio Club and was active in traffic handling and many other ham activities, so he's likely to get a pile-up of calls from Wisconsin friends along the trip. "Eventually, I'd like to settle down in Clearwater or St. Pete to study refrigeration systems and horticulture at a vocational school," says Kyle hopefully.

Mark Twain would be a bit uncertain about the mixture of fiddle music, radio signals, and sailboat fishin' fun that WA9USD will enjoy on the Mississippi. But as Twain once said, "Faith is believing what you know ain't so." Kyle smiles a Tom Sawyer grin like a feller who's got that special faith fer goin' places and doin' things. Then he assuredly says "Bye" and as silent as a sailboat in a gentle wind, slips away on his journey.

We wish you smooth sailing, Kyle.

Correspondence

From Our Readers

FROM THE LAYBRATORIES
OF VRAH REMAH

Dear Jim,

During the past year, in co-operation with Hashafisti Scratchi, my erstwhile colleague in our beloved Nipponland, we pooled our sources on a new concept for the amateur fraternity.

This will easily fit in two racks and monitor three stations at once.

We decided in our RADIO SHACK to be quite REALISTIC to the hams' future needs for a station that would have NATIONAL appeal and be a SHURE winner with an up TEMPO beat, whether you live by the LAKESHORE or even MIDLAND.

Whether it be at KNIGHT or on the MORROW, this BUTTERNUT fail or it will be our SWAN song, as the DRAKE said, our goose will be cooked.

We knew that KENWOOD be one to ask about our idea, as he is a GLOBE TROTTER and knows what hams desire.

When ICOM to think of it, I LAYFAYETTE at some of the circuits we tried that did not have HY GAIN that would be needed by a SUPER PRO.

So, following GENERAL ELECTRIC principles with a GALAXY of small improvements, response has been good, people have called, Will and John said their kids were interested, so if WILSON and JOHNSON think we have something new this CENTURY, all of the WORLD RADIO LABS will look up to us. Even Jerry called, and I said JERROLD buddy, glad to hear from you. Had another call, said HEIL o, is that you, Mac? He said yes EIMAC. I said ELMAC sure is good to hear from you, you always were an ANTENNA SPECIALIST and quite a HUSTLER. Even had a call from Sue, and if a YL approves our efforts, we say YAES SU. *

I GONSET down and BRUSH away my tears of joy.

Sianora until next year, VY Seventy-Trees.

Vrah Remah, J8XGN+1



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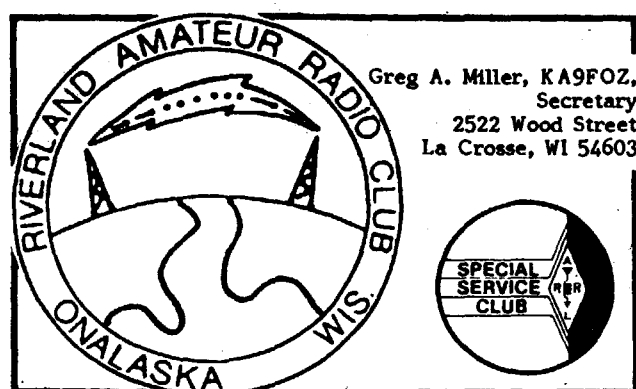
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Greg A. Miller, KA9FOZ,
Secretary
2522 Wood Street
La Crosse, WI 54603

APRIL AGENDA

1. Reading of the March meeting minutes
 - A. Treasurer's Report
2. Committee Reports
 - A. 37/97 Report
 - B. Volunteer Exam Report
3. Old Business
 - A. May Auction
 - a) Need donations, need volunteer to be an auctioneer
 - b) Describe how it will run
 - B. Valley View Mall display on June 25 & 26
 - a) Appoint mall committee, Greg Miller will chair the committee
 - C. Report from Charlie Burch on Explorer Post
 - D. Set up a tentative date for the purchase and replacement of the 37/97 repeater
4. New Business
 - A. Appoint 2 volunteers to set up Novice classes
 - a) Dates, place, and advertisement
 - B. Appoint a Field Day Committee. Set tentative plans.
 - C. Start plans for a summer picnic
 - a) Dates, place, etc.
 - D. Short discussion on meeting night programs that are already in the planning stages
 - E. Comments from the membership
 - F. Cash prize drawing (Nook)

Come and see what's new at YOUR club!!

On March 1, 1988 at 7:36 p.m., the regular monthly meeting of the Riverland Amateur Radio Club was called to order by President Craig Goldbeck. The minutes of the February meeting were approved as

read from the Badger State Smoke Signals. The Treasurer's report was approved.

37/97 REPORT

There was nothing to report at this time.

JACKET REPORT

Jackets can be ordered from Craig, N9ETD, at a cost of \$32.50 and T-shirts at a cost of \$4.00. Both would have our club logo on the back as well as your name on the front.

VOLUNTEER EXAM REPORT

The next exam dates are March 10 and June 16, both to be held at the Community Center. Contact Rick, KV9U, for further details.

OLD BUSINESS

There was no old business to report.

NEW BUSINESS

A letter was read by Craig, N9ETD, that he had received requesting that our club help set up a Packet Radio station in local schools as a learning aid for 4th and 5th graders. The request was that we supply a 2M radio and the school would supply the other needed equipment. Due to no response, it was decided that the letter would be forwarded to Kent, W9LZQ, for further consideration.

Craig, N9ETD, passed out blank sheets of paper to the members requesting that they fill out one side with their suggestions on meeting programs they would like to see and the other side they were to answer the question, "What do YOU want out of YOUR club?" The papers were handed back in with some very good ideas.

It was reported that the Valley View Mall was holding a "Leisure Time" weekend on June 25 and 26 and that they have requested that our club put on an Amateur Radio display during those dates. After a brief discussion it was voted on and passed.

A program suggestion for the May meeting was to hold an auction after the business meeting to raise money to replace the 146.970 repeater. It was discussed that it would be a stand-up type auction with items that were donated by the members. Further details can be obtained from Greg, KA9FOZ.

Mike, NØBSH, reminded us of the upcoming Wisconsin QSO Party on March 20 and 21. He suggested that our club become more active in this type of activity.

Nook, K9EGO, suggested that we start a prize drawing at each of our club meetings to stimulate more fun and attendance. Cost to enter would be 50 cents and the winner would receive \$10.00. Any monies left over at the end of the night would go into the general fund. It was made a motion and second, the motion was passed. Nook agreed to run the drawing at the April meeting.

Craig, N9ETD, gave a brief discussion on some of the different committees that we may have throughout the year and mentioned who would head up each. Club participation is the corner stone of a successful club, therefore we are asking for 100% backing from the membership.

Total members present was 20.

Respectfully submitted:

Greg A. Miller, Sec.-Treas. RARC

-- NOTES --

There is NO program planned for the April meeting, but there will be an organizational meeting of the A.R.E.S. and Skywarn for the persons that are interested and, of course, there will be coffee and doughnuts available.

DON'T FORGET THE AUCTION AT THE MAY MEETING!!!!

After the business portion of the May meeting, there will be an auction to raise money for the replacement of the 37/97 repeater. We are asking that you help in two ways, one by donating some item that you feel will sell at the auction, and second by being in attendance at that meeting, even bring a friend. If you are unable to attend, send an item with another member or call me, Greg, KA9FOZ, and we will make arrangements to get it there.

THE FOLLOWING IS A NEW COLUMN THAT YOU WILL SEE IN THE BSSS EACH MONTH FROM YOUR PRESIDENT:

THE PRESIDENT'S GAVEL

I'd like to thank all of you that turned in your list of personal goals for the club. It was very informative for the Executive Committee in giving us an idea about which direction you want your club to be

(Continued on page 7)

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Date

Net Manager

Robert Silva, KB2DGI, has seen drug dealers and prostitutes. He has watched undercover policemen beat criminals bloody. He has seen people walk into East River Park and never walk out. At night he hears gun shots outside his window, one block away on Avenue D. The 16-year-old and his friends call it Avenue Death. This is where Robert calls home: Manhattan's Lower East Side.

Recently, he came to Huntsville, Alabama - a city of engineers and computers and rockets. But, before he ever saw the city, Steve Roberts, WA4QXH, introduced him to it on the CLASSROOM NET.

Roberts is part of EDUCATION THROUGH COMMUNICATION, a one-of-a-kind educational program sponsored by the Radio Club of Junior High School 22 in New York City, which uses the theme of Ham Radio as a learning tool. The club's call sign is WB2JKJ.

The Huntsville Amateur Radio Club and Roberts decided to give Robert the chance of his life - three weeks in Huntsville and a trip to Space Camp. The club raised \$1,200 to pay for the trip and Space Camp, and Steve asked him to stay in his home.

All this was a result of the Classroom Net, which meets daily on 7.238 MHz at 7:00 a.m. Eastern Standard Time (6:00 a.m. CST) and continues until 8:30 a.m. EST. The net is the start of a full day of edu-

cation based on communication involving well over 200 students who might have never come to class if it weren't for this unique program - a program whose goal is to use the theme of Ham Radio to further and enhance the education of young people.

The Classroom Net encourages check-ins by people in all walks of life who are interested in the incredible possibilities our wonderful service has to offer young people.

For those who come to class on a regular basis, an award will be granted. It signifies the recipient is truly concerned about the future of kids who may never have seen the inside of a classroom if it weren't for the interest and excitement that Ham Radio provides. It is truly a "Class" award from the "Crew at the Core of the Big Apple," helping learning in a way that is as effective as it is thrilling.

Get up, tune up, fight the noise, c'mon to class and meet some of the most wonderful, active and dedicated folks in Ham Radio today. You'll be glad you did, and who knows, like Steve Roberts, you may have a life-long effect on a youngster's future. Start earning a thoroughly "Class" award today.

For more information, contact The Radio Club of JHS 22 NYC, Inc., 111 Columbia St., New York NY 10002. Telephone (516) 674-4072.

RIVERLAND AMATEUR RADIO CLUB

(Continued from page 6)

heading. As we compare them to the goals the Executive Committee has set for itself, the lists look very much the same.

The Executive Committee meets outside of the regular meeting times and will carefully review the lists and give a full report at the next club meeting.

First thing that I would like to see is the attendance increased, which is an important element in the gathering of new ideas and solutions to problems that may arise. I feel that there are many Hams in our area that have never attended a club meeting, much less know the benefits of being in a club. They may run into another Ham that has the same area of interest; those of us who are able to attend know the fun and enjoyment of meeting people that share the same interest. Our club has a great variety of different areas of interest; no matter what you're into, you can bet someone else is too. So, if you know a Ham who isn't a member or maybe doesn't come regularly, drop them a hint; they might be surprised at what they find.

In order to accomplish the things we as a group want to do, we as a group are going to have to all participate if we want to stay successful as the club has been in the past and grow even more. I'm looking ahead with great anticipation in 1988 with this club.

73 until next month,
Craig Goldbeck, N9ETD

MEMBERS PRESENT

| | |
|-------------------|-------------|
| Karl L. Olberg | W4ST |
| Craig Goldbeck | N9ETD |
| Greg A. Miller | KA9FOZ |
| Phil Uehling | W9UP |
| Dallas C. Miller | K9LEC |
| Suyeo Yoshizumi | W9KTD |
| Ernie Gershon | K9ZVU |
| Gary Webb | N19V |
| Jim Brooker | N9DBK |
| Art Osbourn | W0JDC |
| Ken Weigel | N9CDT |
| Duane Fruechte | W9HWQ |
| Ray Wakeen | WA9HMM |
| L. (Nook) Bentzen | K9EGO |
| Larry Birdsong | |
| Tim Stoffel | N59E |
| Van Elston | WA9FIO |
| Rick Williams | KV9U |
| John Kass | WA9IZY |
| Ron Reed | KD9OY |
| GUEST: | Phil Weigel |

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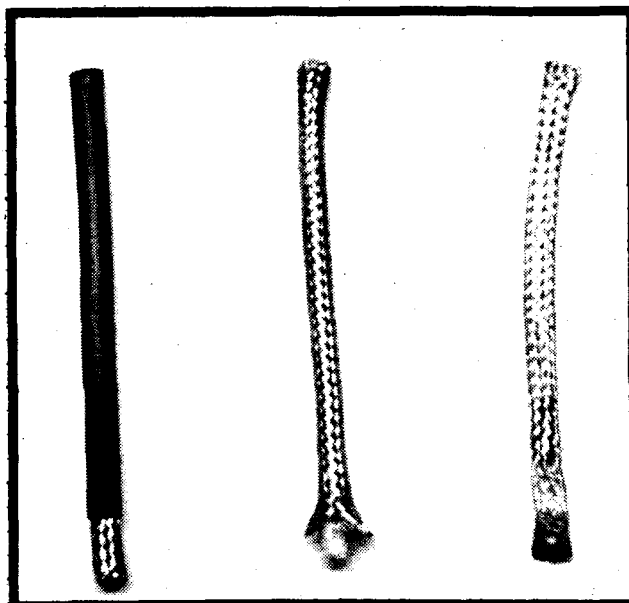
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John's Junk Box

By John W. Frank, WB9TQG
P.O. Box 5113
Madison, WI 53705

COAXIAL GROUND STRAPS?

Here's a nifty use for old coaxial cable I learned from a sheet metal worker in 1976. As I'm sure most hams know, coaxial cable deteriorates with age. But when cable gets old and you start to lose a measurable amount of signal in it, don't throw it all away: save some to use as ground straps.



To make ground straps from the braided jacket of old coax cable, begin by removing the outer jacket from a piece of coax approximately the length of the ground strap you need. Next, slide the center conductor and dielectric out of the

braided shield. Take the resulting cylinder of braided shield and carefully flatten it. Now get out your soldering gun and saturate each end of your homebrew ground strap with solder. The solder prevents the strands of braided copper from coming unbraided. The photo illustrates the procedure. The ground strap at the bottom of the photo has had one end prepared with solder. After the solder cooled, I drilled a hole through it so I could fasten it to a chassis.

Where can you use these homebrew ground straps? Connecting chassis to a common ground is one use. Grounding the hood to the firewall or front fenders of a vehicle to reduce ignition noise in a mobile radio is another use.

Why not use a piece of hookup wire instead of a braided ground strap? Braided ground straps are flexible, and since they consist of dozens of conductors all connected in parallel, they have less inductance than a solid metal strap or single piece of wire.

73, John, WB9TQG

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CRRL Skitrek Award Announced

The Canadian Radio Relay League (CRRL) has announced the "1988 Polar Bridge Diploma" to correspond with the joint Soviet/Canadian Skitrek expedition which begins in March. The attractive, over-size, bilingual (English/Russian) commemorative diploma will be awarded to all amateurs and SWLs fulfilling the following requirements:

To receive the award, Competitors must submit three different calls from Northwest Territories (NWT) Canada, (usually VE8); three different calls from Asiatic stations, USSR, (usually UA9 or UA0); and one base camp station from either Canada or the USSR.

Also required are: one contact from the capitol region of Ottawa,

Canada; and one contact from the capitol region of Moscow, USSR, for a total of nine 2-way QSOs or log entries. Contacts must be made between February 15 and June 15, 1988.

Send your application, certified log data (no QSLs), and 10 IRCs or \$5 Canadian to CRRL National Awards Manager Garry V. Hammond, VE3XN/VE8XN, 5 McLaren Avenue, Listowel, Ontario, N4W 3K1 Canada.

Canada's Department of Communications has authorized the use of the special prefix C18 for use by Northwest Territories (NWT) radio amateurs from February 15 to June 15, 1988. Base station C18C will be located at Resolute Bay, NWT.

(Thanks The ARRL Letter)

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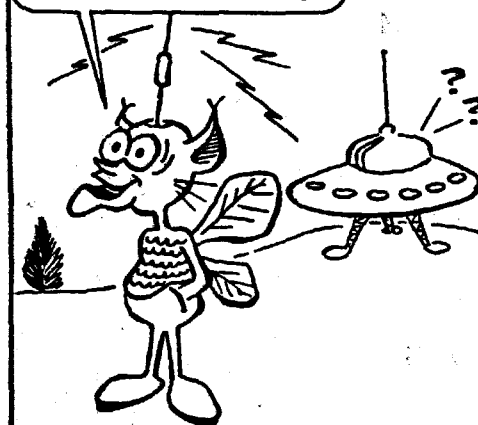
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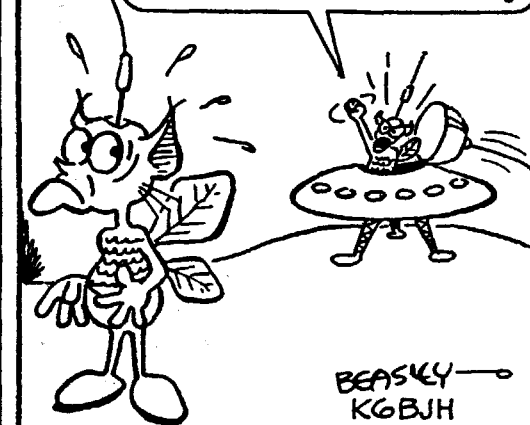


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MESSAGE FROM XERXES!



ARRL/VEC STREAMLINED

(Continued from front page)

In the process, several ARRL/VEC forms have been simplified and consolidated and are now being field tested among those same 13 VE Teams. These forms, when finalized, will be put to use throughout the ARRL/VEC program, reducing the administrative burden on all ARRL/VEC VE Teams.

Overall, this streamlining of the VEC will have positive effects throughout the field. Urgent pre-session exam-element mailings from the ARRL/VEC will be reduced because the most active VE Teams will be stocked, and thus more attention may be given to the needs of individual VE Teams that do not hold exam sessions on a regular schedule.

If you currently hold an Extra or Advanced class license, and wish to participate as a Volunteer Examiner in the ARRL/VEC program, write to the VEC Department at ARRL HQ (225 Main St., Newington, CT 06111). You will receive the latest ARRL VE Manual and materials that explain your responsibilities as a VE. Familiarize yourself with the proper VE procedures and pass an open-book test - and in no time you will receive your accreditation badge.

As an active ARRL/VEC Volunteer Examiner, you'll be joining a team of exceptionally dedicated volunteers who provide an essential service to the hams in their communities. You can share in the personal satisfaction that comes from helping others achieve goals in ham radio.

(From The ARRL Letter)

GOING TO THE MADISON SWAPFEST APRIL 10? Be sure to stop and see some of the Badger State Smoke Signals staff - we'll be in spaces G4 and G5. Subscribe or renew at the old rates!

Is There Life Below 80 Meters?

By Richard R. Regent, K9GDF
5003 South 26th Street
Milwaukee, WI 53221

Twenty amateurs chuckled when Allen Rothschild, W9WAQ, of Watertown, gave the title of his club program: "Is There Life Below 80 Meters?" The group attending the Watertown Amateur Radio Club evening's meeting soon realized the subject was "Operating on 160 Meters" and settled back to enjoy Al's talk.

"First the advantages of the 160 meter band," says Al. "The band works best in winter, but throughout the year there's very little interference or QRM. You can have an hour QSO and never hear another station. It's a gentlemen's band, except for DXing and contesting. During a contest, however, I've worked 45 states in two nights. So it's also good for getting Worked All States. Alaska is rare, I've only heard two. Those KL7 operators have trouble hearing mainland United States stations because of Aurora noise."

"Next the disadvantages," Al continues. "There's some concern for static or QRN, especially in the summer during a lightning storm. Actually, the higher the antenna above ground, the more of it you pick up. Another problem may be finding enough space to put up an antenna." A 130-foot long wire with an antenna tuner is recommended for a simple antenna. "Or take your 80-meter dipole and connect the coax outer shield to center conductor at the feed end. Then carefully plug it into the antenna tuner, but not all the way in so it shorts." This antenna conversion will work fairly well on 160.

In describing the effect of the ionosphere, Al recalls from his vast exper-

ience. "Daytime contacts of 500 miles are possible with 200 miles more likely. Night-time contacts of several thousand miles are possible."

W9WAQ moves over to rows of his DX QSL cards displayed in plastic holders he tacked up on the room's chalk board. There are sixty colorful and impressive QSLs, confirming stations worked on 160 meters. Al has 97 countries confirmed toward his nearly completed 160-meter DXCC, and that took plenty of hard work. "Sometimes I spent 1-1/2 hours calling a single station, waiting for the slow QSB to bring 9-land conditions to a peak, until I could finally break the pile-up of other stations calling," Al says triumphantly.

What are some 160 meter accomplishments? "ON4UN achieved WAZ (Worked all 40 world zones) in one winter, while Oconomowoc's KJ9I worked 100 different countries in just 19 weeks!"

If you haven't tried 160 meters, please do. If you hear W9WAQ on the band calling CQ, give him a call and get a few more tips for having fun on 160 meters. Some of the folks in the group hearing Al's enthusiastic talk went home and got on 160 meters right after the meeting. They found out, there IS life below 80 meters.

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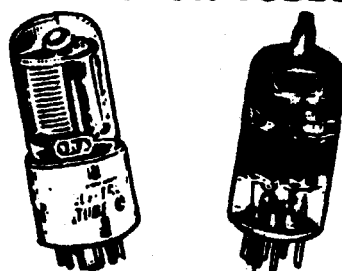
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220 MHz: The Battle Continues

87-14 Update

United Parcel Service, Inc., UPS, has filed late comments in the proposed reallocation of the 220-222 MHz band.

The UPS comment is based on alleged long range plans to develop a nationwide private Land Mobile network using frequencies within the 220-222 MHz band, and employing narrow band technology.

The ARRL has submitted a motion to strike the comments on the grounds that, in addition to being six months late, UPS has not afforded the substantial number of others who have commented on this Docket the opportunity to rebut. The Administrative Procedure Act and the Commission's own rules do not permit this unilateral submission of comments without affording others the opportunity to respond.

The UPS comment was filed on January 29, 1988; deadline for filing of reply comments in this Docket expired July 31, 1987.

In other 87-14 news, the FCC has denied the ARRL's Freedom of Information Act (FOIA) request filed last March for two internal FCC studies of the Land Mobile Service. These two studies, ARRL believed, had suggested that many of the channels in the 800 MHz band were underutilized. The FCC's Field Operations Bureau (FOB) had originally denied the request last March, stating these documents represented advice and internal opinions within the Commission, and, as such, were exempted from FOIA requests.

The ARRL then requested that the Commission review its decision, and on December 21 the Commission again denied the ARRL's request on the grounds that release of such documents would "harm the quality of Commission decision-making" by diminishing internal discussion of controversial issues.
(From The ARRL Letter)

K9GDF Writes Rep. Aspin

Here is the text of a letter written by Wisconsin ARRL Section Manager to Representative Les Aspin, asking Rep. Aspin's help to save the 220-222 MHz segment of the amateur 220-225 MHz band:

5003 South 26th Street
Milwaukee, WI 53221
January 22, 1988

The Honorable Les Aspin
Room 2336 RHOB
The United States House of Representatives
Washington, D.C. 20515

Dear Mr. Aspin:

Please help Amateur Radio retain the 220-222 MHz band by writing a strong letter of opposition to the FCC Commissioners regarding their reallocation proposal contained in General Docket 87-14. The Docket, written February 2, 1987, states that the FCC proposes to reallocate the 220-222 MHz radio frequency band from the amateur service to the land-mobile service, a transfer of 40 percent of the band now in use by radio amateurs.

Only a month later, on March 21, 1987, the FCC allowed "Novice" class licensed amateurs to use the 220 MHz band. Novice Enhancement dramatically and rapidly became an important incentive for the amateur service resulting in an increase in the number of new amateurs. In addition, this is the only band where all classes of licensed amateurs, such as Novices, can talk to each other within a community; providing not only a training ground between new and experienced amateurs, but also a shared band for emergency and public service voice communications.

Ham Radio experimenters, pioneers as they are, designed and built many of the circuits and radios now used on this band. Just recently, commercial manufacturers utilized this technology to mass produce and sell such radios, thus making this band extensively available to more amateurs. Novice Enhancement and equipment availability in the 220 MHz band, both occurring within the past year, have spurred a real and favorable growth in Amateur Radio.

Throughout Wisconsin, there are 25 amateur repeaters in the 220 MHz band. They are used for repeater-control links, auxiliary-receiver links, voice communications or packet-radio high speed data to complement a network of other amateur systems, including those in adjacent states. Five Wisconsin links and one repeater are within the band segment under consideration by the FCC. Without room in the remaining segment into which they might squeeze, these individual amateurs or clubs who own the equipment would face a financial loss of thousands of personal dollars, and the resulting inactivity in certain areas of the state would create communication gaps.

There are over 7,000 amateurs in Wisconsin and nearly 450,000 in the United States; unpaid Federally licensed volunteers who do much work but ask for little. In Milwaukee, for example, amateurs provided vital communications for assisting in the aftermath of a plane crash, a flood, and accurately reported severe weather threats; all as a service, not as a hobby. The public benefits when amateur communicators coordinate the City of Festivals Parade, Circus Parade, Al's Run, Special Olympics, Operation Santa Claus, and countless nonprofit events held for worthy causes every year. Throughout the state, amateurs support their County Emergency Government leaders with volunteer communications, disaster preparedness skills, and their own equipment. Retaining the 220 MHz segment is critical to further such community growth. Please help continue this service by giving us your support. Thank you.

Very truly yours, Richard R. Regent

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Studying Math to Upgrade Your Ticket?

By Ed Rice, W9NGP
W126 Lang Road
Oconomowoc, WI 53066

Recently I was looking at some license manuals to see what a fellow has to put up with these days to up-grade his license. In one place I saw this example of how to calculate resonant frequency: (the numbers have been changed to protect the innocent).

What is the resonant frequency when the inductance is 18 uHy and the capacitance is 100 pF?

$$F = \frac{1}{2\pi\sqrt{LC}}$$

$$F = \frac{1}{(2)(3.14)\sqrt{(18 \times 10^{-6})(100 \times 10^{-12})}}$$

$$F = \frac{1}{(2)(3.14)\sqrt{1800 \times 10^{-18}}}$$

$$F = \frac{1}{(2)(3.14)(4.2426 \times 10^{-9})}$$

$$F = \frac{1}{2.6644 \times 10^{-8}}$$

$$F = 3.7533 \times 10^6$$

If I didn't know better, I would think that this example was written by my old Algebra teacher, Miss Pinchbottom. She was a true mathematician and, like all of her kind, she believed that mathematics was a science, a technology in its own right. She thought that everyone else would see her long-winded calculations as things of beauty, the way she saw them. Her students had to write out every step, putting in all those fancy notations and powers of ten. We were never allowed to move a term from one side of an equation to the other without showing all the steps. And to cancel zeros in the numerator with zeros in the denominator was an unpardonable sin. Woe be unto the lowly student who inadvertently moved an exponent from inside the parenthesis to outside. For he was banished to the island of Irrational Numbers to spend the rest of his days under the Vinculum seeking the factors of $X^2 + Y^2$.

Well, I didn't agree with Miss Pinchbottom back then. And, after 37 years of teaching college level mathematics and electronics, I have come to believe that math is merely a tool; an aid to get the values needed for a circuit. Amateur radio is my hobby, not mathematics.

The example above is not a tool; it's an obstacle. All you need to do to get the

Help is on the way.

frequency is to divide 250 by 18 and press the Square Root key on your calculator.

Here's how it works. Instead of the formula

$$F = \frac{1}{2\pi\sqrt{LC}}$$

which Miss P. would have thought was a very impressive place to start, let's use an easy modification like this:

$$(MHz)^2 = \frac{25000}{(\mu Hy)(pF)}$$

The value, 25000, is a constant which handles the reciprocal of 2π and adjusts the powers of ten so the result is in MHz directly when the inductance is in uHy and the capacitance is in pF. Since MHz, uHy and pF are always used in radio, why not put them directly into the calculation.

The solution looks like this:

$$(MHz)^2 = \frac{25000}{(18)(100)} = \frac{25000}{1800} = \frac{250}{18}$$

$$(MHz)^2 = 13.89$$

Remember that the value, 13.89, is the square of the frequency, so

$$F = \sqrt{13.89} = 3.728 \text{ MHz}$$

If you want more accuracy, use 25330. But it's hardly worth the trouble since it will only affect numbers in the 2nd decimal place, and thereafter. I often replace the three zeros with "K", now that I am beyond the reach of Miss P., and write simply

$$(MHz)^2 = \frac{25K}{(\mu Hy)(pF)}$$

Note that the formula can be written

$$\frac{(MHz)^2}{1} = \frac{25000}{(\mu Hy)(pF)}$$

This is a simple proportion. And, like any proportion, it always allows us to switch factors from the top of one side to the bottom of the other side, and visa versa. So we get two more formulas like this:

$$\mu Hy = \frac{25000}{(MHz)^2 (pF)}$$

$$pF = \frac{25000}{(MHz)^2 (\mu Hy)}$$

Miss Pinchbottom never told us it was this simple, although she did ramble on occasionally about exchanging means and extremes. "But only when they are factors, never when they are terms," she used to say.

With these two new formulas we can find the inductance or capacitance needed to resonate at a desired frequency. For example:

How much capacitance must be used to resonate a coil of 18 uHy at 3728 KHz?

$$pF = \frac{25000}{(3.728)^2 (18)}$$

(note that I inserted a decimal point because FREQUENCY MUST BE IN MHz. Also, don't forget that it's squared.)

The rest is a matter of pushing buttons on your calculator.

Enter:

$$25000 \div 3.728^2 \div 18 =$$

The display now reads 99.98. Adding the label, "pF", and rounding off a bit, we get 100 pF, which is the capacitance we started with.

Here are some to try for practice:

1. What would be the resonant frequency of a circuit using 35 uHy and 50 pF?

Ans: 3.78 MHz.

2. How much capacitance is needed to tune a 60 uHy coil to 1.950 MHz?

Ans: 109 pF.

3. What should be the inductance of a coil to be used with 150 pF to tune to 7200 KHz?

Ans: 3.2 uHy.

4. Determine 3 pairs of values for L and C which will resonate in the 20 meter band. Check your values in the modified formula.

(This one is a little tougher. Oh! Miss Pinchbottom, where are you when we need you?)

Eau Claire Amateur Radio Club

Bob Fallis, W9BAR,
Secretary
1851 McKinley Road
Eau Claire, WI 54703

The next meeting of the Eau Claire Amateur Radio Club will be held on Tuesday, April 12th, at 7:30 p.m. in the Parks and Recreation Building.

MINUTES OF THE MARCH 8TH MEETING

The meeting was called to order at 7:25 p.m. by Vice President Mike McAlister, WD9DLM. Twenty seven members were present. The minutes of the February meeting, as published in BSSS, were approved. The financial report was approved as read.

BUSINESS REPORT

KD9OB, Layne, has filed the papers for our incorporation as a non-profit corporation.

Steve, KD9YO, reported on the Hamfest. All arrangements are proceeding nicely. The flyers have been printed, and are ready for distribution. Anyone traveling to an out-of-town event are asked to take some along and pass them out. Carl, W9NW, reported that examinations will be given in conjunction with the Hamfest. Walk-ins will be accepted.

A Skywarn training video will be shown at the next meeting, after which our role in the system will be discussed.

Lunch committee for April meeting: WD9DLM, N9FLK.

The meeting was adjourned at 7:40 p.m.

After a short lunch break, the group traveled to the Eau Claire County Court House, where the 911 facility is located. After a short orientation meeting conducted by Patrick McNally, we toured the emergency communications center.

Respectfully submitted:

W9BAR, Secretary

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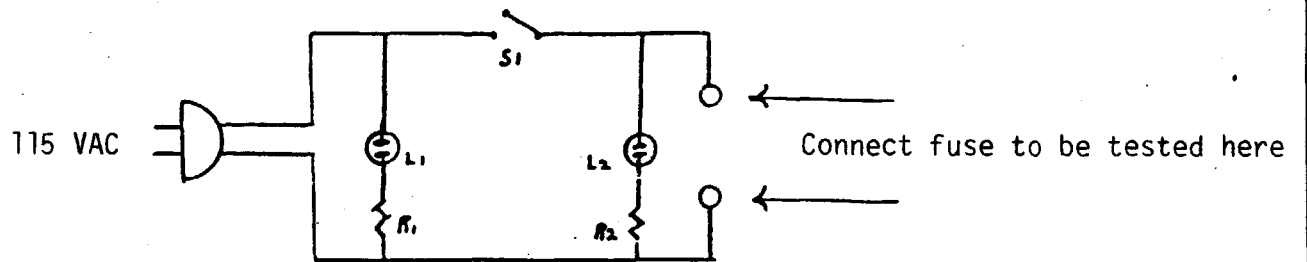
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2. Insert plug into outlet. L1 should be illuminated.
3. Operate Switch S1. A loud popping sound may be heard and L2 should now be illuminated. This indicates that the fuse under test WAS good.
4. Protective equipment should be worn, such as welding helmet, leather gloves and long-sleeved shirt.

WARNING: Testing fuses may be hazardous to your health!
-WA8IWZ

Tesla Coil Design Program

Resonance Research Corporation is developing a comprehensive Tesla coil computer design program for spark-excited Tesla oscillator systems. This program provides every facet of modern Tesla coil engineering and provides the design engineer with exacting component values and specifications to assist in high performance Tesla coil construction. The program includes:

Capacitive reactance
Transformer I/O potentials/currents
Transformer KVA levels
Capacitor energy
Capacitor design equation
Power level vs. capacitor size
Transformer impedance
Resonant frequency calculator
Cap. frequency shift
Pri. cap. vs. frequency
Inductive freq. shift
Sec. coil capacitive frequency shift
Sec. resonant frequency
Primary inductor design equation
Sec. wire length
Balance inductor value, coil width
Coil form diameter
1/4 Lambda wavelength

Wire turns/inch calculator
Coil form material selector
Coil aspect ratio
Power level vs. coil form diameter
Output spark length
Toroid vs. power vs. coil form diameter
Spark gap selector
Rotary spark gap calculator
RSG speed (ft./sec.)
Pulses/sec. equation
Peak power level
Breakdown potential vs. gap spacing
RF reactance calculator
Toroid selector
Inductive reactance

This complete Tesla coil design program will run on any IBM Personal Computer or any IBM clone (PC, XT, or AT). A printer option menu provides complete printout of all design parameters. A Y/N (yes/no) option allows quick recalculation if the designer chooses to change design parameters.

This program will be available to designers after May 1, 1988. For more information, contact Resonance Research Corporation, Rte. 1, Shady Lane Rd., Baraboo, WI 53913. (RRC news release)

Oops!

The caption under the cover picture ("The WNA Stalwarts") in our November, 1987 issue was correct, for the most part.. however, the fellow at the left end of the back row is unidentified. So, to correct the caption, just shift the identifications for the subjects in the back row one person to the right. (We

still don't know who that feller is, either.) Thanks to Rich Regent, K9GDF, for pointing out our boo-boo.

SILENT KEY

We regret to report the death on March 8, 1988, of William Nagle, Jr., WB9GYQ, of Wisconsin Dells.

Immigrant asks help

(The following letter was forwarded to Badger State Smoke Signals by Section Manager Rich Regent, K9GDF. It was sent originally to ARRL Headquarters in Newington, CT., then from HQ to Rich.)

Rev. Zbigniew A. Wsul
(SP7IFF, Zibi)
P.O. Box 7
Lublin, WI 54447
February 21, 1988

Dear Editor, Dear Friends Hams

I write to you because maybe you will get interested in my story and will help me.

I am a Pastor in Polish National Catholic Church in a little village of Lublin in Wisconsin. I am 30 years old. I came to your country from Poland. There for 14 years I was heard as SP7IFF and when I became a priest - as SP7IFF/9, /7. As a seminarist and later as a priest, I was in 1980 and 1986 in Vatican and worked as HV1CN/SP7IFF (1980) and HV1CN (1986). I had to leave Poland because of many reasons and I went to West Germany. There I found a great friend, Martin DK9DC, a retired Lutheran pastor. He helped me in my personal life and in my hobby - ham radio. I was heard from his QTH as DL/SP7IFF/p. I worked on TRX IC-701 and 3 el Yagi and Windom for seven months and I made over 800 QSO with 88 countries.

On December 14, 1987, I came to USA with my wife. I am here for the 1st time.. and permanently. Everything here is fascinating, but also different. New people, different customs, different way of life. Till today I have trouble with my English. Even this letter was translated by my wife. I was very disappointed by the fact that, although in Poland I was a ham for many years and made many thousand QSO with over 100 countries, my licence was not valid in USA, and I had to start from the beginning. I didn't know any radio amateur here. I only had a callbook and in it I was looking for hams in Wisconsin. Finally I found a very nice ham - Carl, W9NW and his wife, from Eau Claire. They encouraged me to take the test in January. I tried, but unsuccessfully. After this attempt, however, I started to study from "Tune in the World" whenever I had time. After reading the text I started doing the test. And finally I decided to take the test

again on February 20, the seventieth day of my stay in USA (hi), in Carl's house in the presence of another radio amateur - Stan W9HNH - who is a Polish American. I solved the Novice test 100% in a few minutes. Maybe it is not a big success, but I am very glad. In a few weeks I will get my American call sign and I will be able to make contacts again like in SP, HV, DL. Ham radio is my big passion. As a radio amateur I am interested in DX QSO, friends meetings and also antenna experiments.

But I have a problem. And I want to ask you for help. I don't have equipment. I don't even have a solder or screw driver (hi). I am starting a new life. It is a slow start, and I would like as soon as possible to turn my own radio on, call first CQ, make first QSO, first DX, make first QSO with SP - my homeland. Enter again this specific ham climate.

And I would like to ask you for any help you can possibly give me, maybe for publishing this letter in the next QST, maybe for giving this letter to an organi-

zation that would like to help me, and maybe you know someone who has a good radio which he does not use because he has another, better radio. And maybe you have still other possibilities that I don't know of.

I have now some time before receiving my call sign to assemble antenna, radio, microphone and key.

I would like to appear as soon as possible on the amateur bands as the next "W".

Like every immigrant, I have no possibility to repay my donors financially.

I can only add that I left my self made (home made) radio in Poland where it is waiting for another beginner radio amateur.

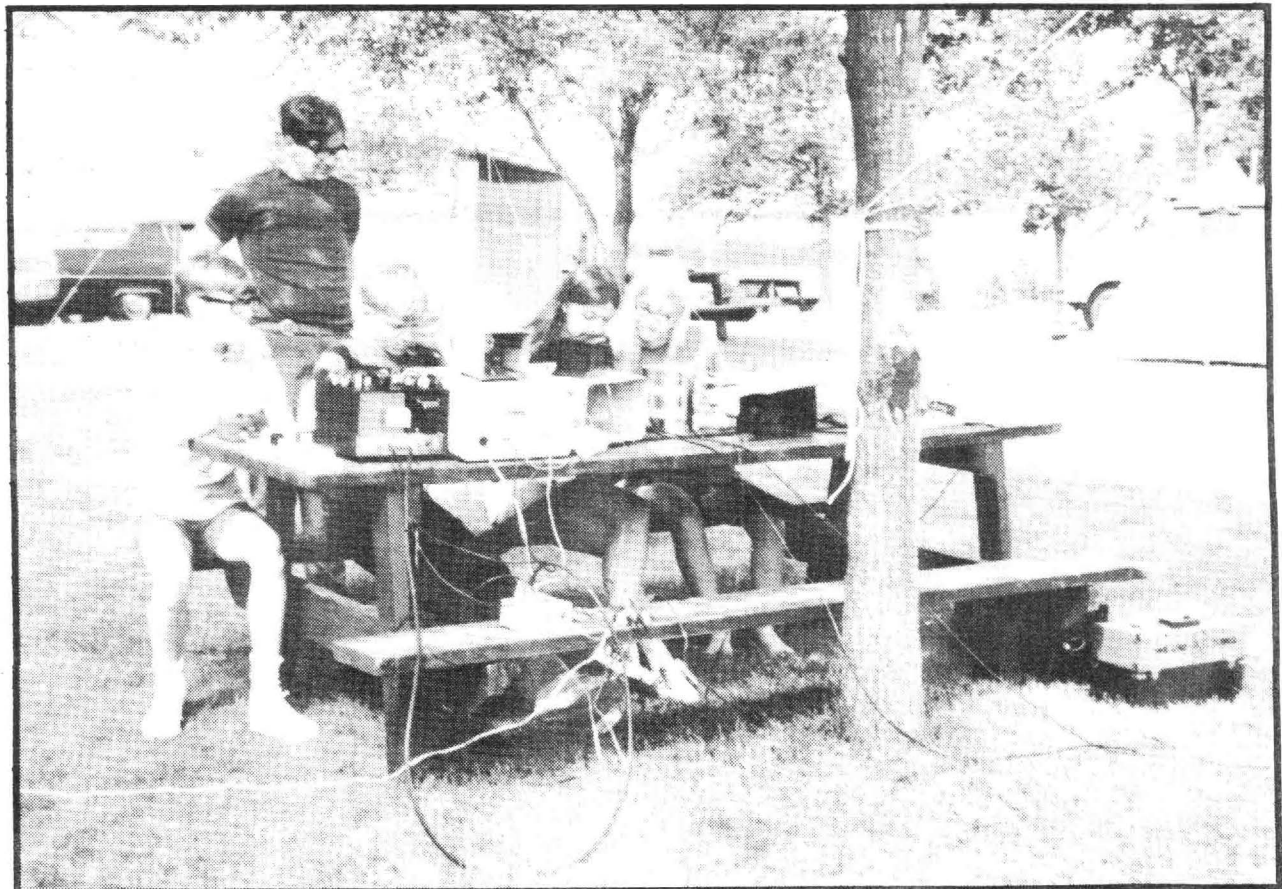
I, as a priest, can only remember in my prayers those who will help me.

Waiting for your answer I greet you

73 and 76 (God bless you)

Rev. Zbigniew A. Wsul (ex SP7IFF)

Think WARM!



AFTER A WINTER LIKE THIS ONE, one can't help thinking about warm days and balmy breezes - and this photo will help remind us that there is indeed a summer in this state! This is an early Field Day operation of the Yellow Thunder Amateur Radio Club, at Owen Park in Columbia County.

In this Novice station photo, taken around 1971 or 1972, are, left to right: John Swafford, WN9HTB, Prairie du Sac; Allan Johnson, WN9FMU (standing), Mount Horeb; Rick Anderson, WN9EWQ, Baraboo; Nina Johnson, WN9EBN, Portage (now Nina Schroeder, N9ENV; husband Hank is WB9-QDT); and Laura Robinson, Portage, a friend of Nina's. All the calls are Novice

call signs; the locations given are where they resided at that time. About 20 different crystals were stuck in the top of the transmitter - a "rock festival?"

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Communication within the Marshall Islands

By Nancy Vander Velde, AA6EA
940 Arbolado Road
Santa Barbara, CA 93103

Communication within a country of only 70 square miles normally would not be a problem.... if this small land area was massed together. But in the Republic of the Marshall Islands, this tiny amount of land is spread amongst more than 1,000 islands scattered over a half million square miles of the Pacific Ocean. So from the earliest days of human habitation, communication has been the backbone of this society.

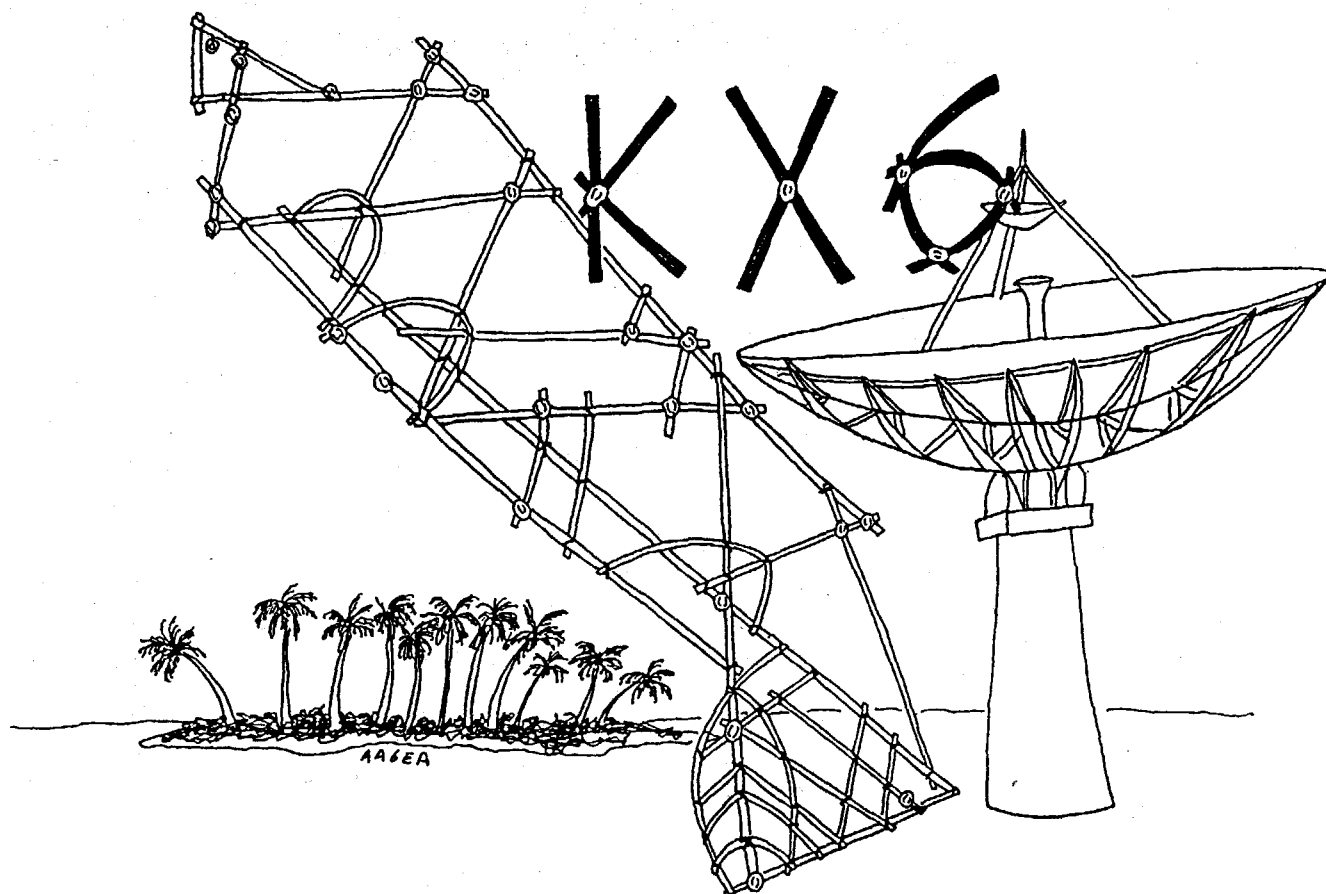
Initially, outrigger canoes were the only means to send word from one island or atoll to another. One has to admire both the courage and navigational abilities of these so-called "primitive" sailors, for they would cross hundreds of miles of open ocean and accurately arrive on a strip of flat land that is not even visible beyond the near horizon. They had no modern compasses or marine radios for emergencies. They knew their way because each and every navigator had carefully studied a chart of pandanus wood, coconut fiber and sea shells. From these, wave patterns and island locations were precisely known.

The ancient art of Marshallese navigation and long-distance outrigger communication has essentially vanished into history. But the communication that is now making history on the Marshall Islands is the modern electronic version.

Granted, three-element beams or towers do not dominate the skyline, and even telephones will not be found in most homes of the highly Westernized capital of Majuro, but there are a few amateur radio operators based on both the atolls of Majuro and Kwajelein. There are, of course, not the large number of hams in the big cities of the United States with their special interest groups. Yet, for instance, on Kwajelein, there are enough operators to have their own club and two-meter repeater. And individual hams have as up-to-date gear and radio interests as could be expected anywhere on earth!

Most of these hams have come from other parts of the world, bringing with them both their hobby and their distinctive accents. So while you may find a KX6 station on the air that can give you a taste of what the official language of this Micronesian nation, Marshallese, sounds like, you are actually more likely to find operators with varying degrees of knowledge of Marshallese and who speak with American, Australian, or even Tuvaluan accents.

If you should want to become portable or pertinent DX yourself in the Marshalls,



the agency to check with, especially for non-U.S. hams, is the Department of Transportation and Communication.

Yet even without making the long trip, you can tap into "Radio Marshalls," WSZO, "The Mighty Voice of the Marshalls," a short-wave station at 6.070 and 4.940, and also broadcasting at 1.090 MHz, between 7:00 a.m. and 10:00 p.m. local time (1900 to 1000 UTC), at 10,000 watts. World News is the simple retransmission of Voice of America or Radio Australia. There is also local news given in both Marshallese and English, as well as popular music of all sorts (rock to country), from the United States and elsewhere, interspersed with Marshallese songs. If trying to attune your ears to the initially strange sounding tongue of Marshallese, it is safer to concentrate on the spoken broadcast rather than the music, because other Pacific Islander songs are played, and you may end up being enchanted by a Gilbertese melody by mistake.

On the two main population centers of Majuro and Ebeye, (Kwajelein Atoll), with over 20,000 people between them, there are less than 1,000 phone numbers. (This figure excludes the American base on Kwajelein Island itself, next door to Ebeye.) As strange as it may seem, cars and taxis serve as good replacements for telephones, especially on Majuro. For only 30 cents a taxi ride to anywhere in the metropolitan area, a telephone can seem to be rather a luxury. And when all else fails, the old method of putting one foot in front of the other and visiting in person is hard to beat.

When someone who is without a telephone needs to contact an overseas location, (and does not have an amateur radio or is going to talk business), the Satellite Communication Station is able to make the connection. The dish used is monstrous! In a nearby office, an operator does the ac-

tual dialing for the caller. At \$4.00 a minute to the United States and even Guam, and \$3.00 to as nearby as the State of Kosrae, and as much as \$5.00 a minute to other places, one has a tendency to talk rather quickly. And telegraphs are slightly less (40 cents per word), but still limit conversation.

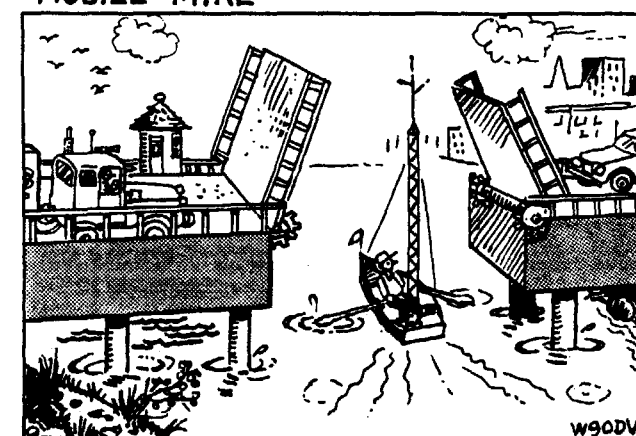
The phoneless Outer Islands are kept in communication with the population centers and the outside world by means of a government owned single-sideband short wave station on a marine frequency.

Electronic communication within the Marshalls is just beginning to open up, as the ancient wood and sea shell type has faded into non-existence. As Telex, HF, VHF, Business and other commercial radio begin to grow with this new nation, amateur radio will also expand. More and more KX6 call signs should be heard on the airwaves, and island names such as Jaluit, Enewetok, Namorik, Maloelap, Alingalapal, Mili, and Ailuk may no longer be such oddities to non-Marshallese ears.

Yokwe im jiljilimjounfoul-jilu

(Greetings/love and seventy-three)

"MOBILE MIKE"



From the Editor

WE WERE LATE LAST MONTH

Yes, we were indeed late with our February 1988 issue. Two events took place to slow things down: (1) Some essential material arrived very late, (2) the printer had problems. It normally takes two days from our delivery of the pasteups to the printer to having the finished papers. Last month, it took five days; the printer had some press problems, and BSSS had to be run twice. We thank the printer for re-running the paper, and we apologize for the late delivery.

This emphasizes that we must have materials due for publication on or before the deadline. The normal deadline is the 10th of each month (it varies, but only slightly, so it would be simplest to consider our deadline as the 10th of the month). If the material to be published is club minutes, then (but ONLY then) we need the material, under normal circumstances, no more than 8 days after the meeting.

BSSS RATES GOING UP

Doggone it.. we have no choice, gang. We have to increase BSSS subscription and advertising rates. Now, before you steam too much, please consider this:

The BSSS staff (Ken Ebner, K9EN; Jim Decker, WB9UQT; Harry Westlund, K9EHJ; and myself) works free. The only money we get from BSSS is reimbursement for our-of-pocket expenses. We work free - but our printer does not and, as you have probably read, neither does the U.S. Postal Service. We also have to buy layout materials and related items (printer ribbons, border tape, rubber cement, sheets of type to set headlines, blades for the X-acto knife, paper, layout bristol, etc.).

Since October 1987, we've have had two printing cost increases totalling nearly 20%. The U.S. Postal Service is increasing rates for our category of mailing 33%. Sadly, none of us are rich enough to fund this paper ourselves.

We think we've accomplished something unique with BSSS. We offer a good newspaper at rates that are more than affordable, even with our rate increases. We accomplish that by working at no charge. However, some of our costs are clearly beyond our control - the ones cited above. To help put the postal increase into focus, the increase of 33% in our postage cost will increase our yearly postage cost - at the present level of mailing of 700 copies a month - by \$350.00.

A 16-page issue costs us around \$215.00 to produce 750 copies; it was around \$179.00 a year ago. That's another \$432.00 a year increase! And, note that last month's issue and this issue have 20 pages.

Our rates were set to keep the paper solvent, but no more than that. The new rates will accomplish that, and only that, but it would be great to have even a small surplus! Until and unless things pick up,

particularly display advertising, we can stop dreaming of a laser printer system! Here is the new rate schedule:

REGULAR INDIVIDUAL SUBSCRIPTIONS

(Effective April 15, 1988)

| | |
|---------|---------|
| 1 Year | \$8.50 |
| 2 Years | \$16.00 |
| 3 Years | \$23.00 |

CLUB RATES

Subscribing members of club only - 10 or more subscriptions: \$5.60 per year

All members of club (billed quarterly):

| | |
|-----------------------|-----------------|
| Less than 50 members: | \$5.40 per year |
| 50 or more members: | \$4.80 per year |

(Must include all members of club; also, up to 15% additional complimentary mailings can be made at no added cost, such as to community leaders, emergency government personnel, prospective members, etc.)

NON-COMMERCIAL ADVERTISING

| | |
|---------------------------------|-------------|
| Hamfest/Swapfest business card: | \$48.00/yr. |
| Hamfest flyer reproduction: | \$25.00 |
| Two times: | \$45.00 |

There is no added charge for reproducing a Hamfest/Swapfest flyer (one time) for Hamfest/Swapfest Business Card advertisers.

REGULAR ADVERTISING RATES

(Effective June 1, 1988)

| | | |
|-------------|------------|-------------|
| FULL PAGE: | 70.00 (1X) | 63.00 (2X) |
| 56.00 (4X) | 52.50 (6X) | 49.00 (12X) |
| 1/2 PAGE: | 42.00 (1X) | 37.80 (2X) |
| 33.60 (4X) | 31.50 (6X) | 29.40 (12X) |
| 1/4 PAGE: | 24.00 (1X) | 21.60 (2X) |
| 19.20 (4X) | 18.00 (6X) | 16.80 (12X) |
| 1/8 PAGE: | 13.50 (1X) | 12.15 (2X) |
| 10.80 (4X) | 10.13 (6X) | 9.45 (12X) |
| BUS. CARDS: | 6.70 (1X) | 6.03 (2X) |
| 5.70 (4X) | 5.03 (6X) | 4.69 (12X) |

These rates are based on camera-ready copy; there are additional charges for copy requiring setup. These charges are based on actual cost.

FOR MORE INFORMATION ABOUT DISPLAY ADS, contact Harry Westlund, K9EHJ, Advertising Manager, 720 Jefferson Street, Baraboo, WI 53913, (608) 356-6836. FOR MORE INFORMATION ABOUT CLUB RATES, contact Ken Ebner, K9EN, 822 Wauona Trail, Portage, WI 53901, (608) 742-3560.

The Old Family Album



Gary Pratt, WB9ECO, (WN9ECO, 10 years old when this picture was taken around 1970), originally from Baraboo, now lives in Duncanville, Texas, with his wife Vicki. Gary is a Charter Member of the Yellow Thunder Amateur Radio Club, and has been a continuous member from 1970 to the present. He graduated from the University of Wisconsin in Madison in 1980 with a Bachelor's degree in Electrical Engineering, and he is currently working in that capacity in Dallas, Texas. Gary and Vicki are expecting their first child in June - appropriately enough, around Fathers' Day. That homebrew transmitter in the picture proved to be a little testy - I don't remember if it ever was tamed down. Maybe Gary will let us know.

- K9ZZ

BSSS is a Winner

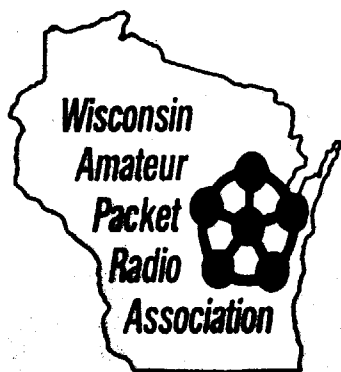
Badger State Smoke Signals was given a "superior" rating in the just-completed annual publication contest sponsored by the Amateur Radio News Service. We'll have more information in next month's issue of BSSS, including other Amateur Radio newspapers in Wisconsin which received ratings in the contest, and about the Amateur Radio News Service itself.

19 Hams in Wisconsin

Harv Hamer, K9YHO, Baraboo, was recently pondering the number of hams in Wisconsin. He did a bit of research, and here is a list of all 19:

| | | |
|------------|------------|------------|
| Ashburnham | Bellingham | Chatham |
| Dedham | Eastham | Framingham |
| Hingham | Needham | Oakham |
| Pelham | Petersham | Raynham |
| Stoneham | Tyringham | Waltham |
| Wareham | Wenham | Wilbraham |
| | Wrentham | |

That's it.. just 19 "hams".. but there are 43 "villes" in Wisconsin.. maybe we'll publish that list next month.. or next April!



THE WISCONSIN PACKETEER

Wisconsin Amateur Packet Radio Association (WAPR)
P.O. Box 436 Cedarburg, Wisconsin 53012-0436

Steve Loeffler, WB9ZRE, Editor
123 W. Oshkosh St
Ripon, WI 54971

Letter to the Editor

Hi Steve,

I have been reading the packet column in BSSS and enjoy it very much. Recently in QST, W2UP described C-64 software which does what the March issue of 'Packeteer' mentioned. He is giving it away for price of disk, mailing, etc. Also included, is a schematic for a modulator/demodulator circuit which is required. One option not available in that original software was digipeating. A new version is now available, I use it, which allows for digipeating. This software is from Germany. It is object code only documentation on disk. W2UP is having circuit boards made up for those wishing to build the modulator/demodulator circuit. This set-up provides a reasonable cost alternative for those wishing to get on packet. The circuit costs about \$35-40 to build.

The name of the program is Digicom-64 and the current version available is 2.0.

73, Jerry - N9AW

C-64 Software TNC

I now have more details on the C-64 software TNC. Download file DIGICOM.TXT, in the C-64 subdirectory: type "D C64/DIGICOM.TXT". As it turns out, this program seems to have many capabilities not available from any hardware TNC currently sold. And the software is apparently public domain! I intend to get a copy of this one myself & give it a try.

73, Doug - SYSOP @ W9WI-1

Easy Computer Fix

Well, I got my multifunction card and hard drive working again. I should have thought of this problem earlier, as I've had it many times at work, but this is the first time it's plagued my own equipment.

The problem was VERY simple--- dirty edge connectors. The hard disk controller was cleaned with Q-Tips and rubbing alcohol (99 cents for a pint at Walgreens'). I used something a little more sophisticated on the multifunction card, but the Q-tips & alcohol would have worked as well.

I guess the lesson is, if you have plug-in expansion cards on your computer and things get flaky, try cleaning the edge connectors, you might save yourself lots of frustration. Not to mention money!

73, Doug - SYSOP @ W9WI-1

(If the edge connector is badly oxidized and

alcohol isn't working, try using a pencil eraser on the contacts. The slight abrasive in the eraser will quickly remove the oxidation. -ED.)

(If you can locate some, a light coating of "Cramolin" will help protect the contacts from future problems. k9en)

TCP/IP Eproms Available

Mike Chepponis, K3MC, author of KISS for the TNC2 has merged KISS with version 1.1.5 of the TNC2 code. It is now available from TAPR.

TAPR will program your EPROM (27C256) for \$2 plus a prepaid return mailer. TAPR has blank 27C256 EPROMs available for \$10. If you choose to buy the EPROM from TAPR, they will include the mailer and postage in the purchase price of the blank EPROM, but include additional \$2 for programming.

TNC2 release 1.1.5 requires 32k RAM in your TNC2. If you haven't already upgraded, 32k RAM chips and upgrade documentation are available from TAPR for \$20.

I suggest that foreign shipping addresses include sufficient postage to assure airmail delivery. If you don't know the rates add \$1 per EPROM.

Andy - NOCCZ

TAPR's address: TAPR
Box 22888
Tucson, AZ 85734

Trojan/Virus Programs

Recently, a few amateur radio bulletin boards have been plagued by a series of files categorized as "trojan" or "virus" files. These nasty files are written with the intent to destroy files, delete files from both diskette and hard drives, and make your hard drive unusable by erasing the 'fat' table, etc. Some of these files take the names of well known files, and only require one second of 'run time' to do their job! So, IBM/compatible 'PC' users should be very cautious when obtaining files from BBS's, or any source not known as reliable.

Here's a listing of some suspect filenames:

| | | |
|--------------|---------------|--------------|
| ANTI-PCB.COM | ARC513.EXE | ARC514.COM |
| BACKTALK | CDIR.COM | DANCERS.BAS |
| DISKSCAN.EXE | DMASTER | DOSKNOWS.EXE |
| DPROTECT | DROID.EXE | EGABTR |
| EMMCACHE | FILER.EXE | FINANCE4.ARC |
| FUTURE.BAS | MAP | NOTROJ.COM |
| TIERED | TSRMAP | PACKDIR |
| PCW271XX.ARC | QUIKRBBBS.COM | QUIKREF |
| RCKVIDEO | SECRET.BAS | SIDEWAYS.COM |
| STAR.EXE | STIPES.EXE | TOPDOS |
| VDIR.COM | | |

Four files which MAY be of some help in

detecting a 'trojan' or 'virus' file are:

PROTECT.COM (1K) DPROTECT.COM (1K)
BOMBSQAD.ARC (6K) CHK4BOMB.ARC (11K)

It would pay to keep a sharp eye out for any of these files!

Vy 73, Dick - KOVKH

(Anyone who downloads a 'trojan' or 'virus' file from a BBS should IMMEDIATELY contact the SYSOP of the BBS in order that the file can be deleted, hopefully before anyone else has downloaded it. The SYSOP should immediately place a Priority notice to all users about the problem, and attempt to isolate the source of the upload. The solution to the problem is tracing the program back to the source! It is unfortunate that these sick minds must hamper the state of the art. Remember to back up your files before trying a new program. - ED.)

Ham Radio Internetworking - An Introduction

Dan Frank, W9NK

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Introduction

In the late seventies and early eighties, a group of experts took a look at the state of computer networking in the United States. They found that there were many successful local and wide-area networks. Each one of these networks served the computers of one corporation, university, or research establishment. The users of these computers, however, wanted to talk to people (and programs) in other organizations.

The obvious solution would be to plug together all the networks to make one big one. Unfortunately, there were two problems. First, most of them were local area networks like Ethernets, which were unsuited to long-haul communications. Second, and worse, everyone seemed to be using a different hardware and software networking solution. Since no one was going to throw away their whole network and buy new equipment and programs, the network experts had to find a different solution.

"We'll design a standard message format and protocol", they said, "that we can wrap up in the messages of any other existing network, so that network doesn't even know they're there. Then we'll put bridges between the networks so these standard messages can flow between them, and create one giant network out of many small ones." This idea of "concatenating", or joining many networks into one is known as the "catanet" model, and the messages and protocols that made it possible are called, collectively, the "Internet Protocol Suite". Today the Internet joins computers all over the US and the world, from PC's to the largest supercomputers.

Internet messages flow over dial-up lines, ethernet, public switched data networks such as Tymenet and Telenet, and satellite and microwave links; just about every form of electronic communications can be used to pass Internet messages.

The state of amateur radio networking today is in many ways similar to the situation that motivated creation of the Internet Protocols (popularly known as "TCP/IP"). We have several different local and wide-area network technologies in use. Some, such as AX.25 digipeating, are in the public domain. Others, such as NET/ROM, are not. NET/ROM, TexNet, and COSI, the three contenders for level three (store and forward) wide area networking, are incompatible with each other. This is, as far as it goes, a Good Thing: as radio amateurs, we should be experimenters. The proliferation of these different networking schemes is a sign that hams are thinking and working hard on new and better ways to do things. However, this goal of experimentation would seem to conflict with our desire to set up a single, universally compatible national network.

Luckily, the same trick that worked for the network experts in the early eighties can work for us now: the Internet Protocols. We can continue to experiment and develop the best possible local and wide-area nets, confident that those nets will be able to carry Internet messages.

The Internet Protocols

As we mentioned above, the Internet Protocols are more widely known as TCP/IP. These are the names of the two most basic protocols in the suite. In this section, we'll describe them, as well as some of the common application level protocols that run on the Internet.

IP are the initials, not surprisingly, of Internet Protocol. IP messages, or "datagrams", are the basic units of Internet communications. A datagram has many things in common with the Radiograms carried by the National Traffic System (NTS):

- o A Radiogram has a source and destination address but no information on how it is to be routed to its destination. Routing is handled "under the covers" by the structure of the network. The same is true of an IP datagram.
- o Both Radiograms and IP datagrams carry some "check" information that lets the recipient know if the message has been damaged in transit.
- o While we know that when we send a Radiogram there is a good chance it will be delivered, we also know that there are no guarantees: it may fall under someone's desk, or a relay station may neglect to send it on or deliver it. IP datagrams aren't guaranteed to be delivered, either. If an IP relay station gets too busy and can't handle a datagram, it is considered acceptable to throw it away.
- o Both Radiograms and IP datagrams are passed from one relay to another until they reach their destination. This is called "store and forward" networking.

IP datagrams have some other interesting characteristics. If a large datagram of, say, size 1000 arrives at a network that can only

carry 256 bytes of data in each packet (like amateur packet networks!), the IP software automatically "fragments" the datagram into as many smaller ones as necessary. These fragments are reassembled at the receiver into the original 1000 byte datagram. IP is also very tolerant. The fragments don't have to arrive in the right order at the other end; the receiver will hold the pieces until it can make a whole datagram out of them again!

You may be asking, "If you can't guarantee the delivery of IP datagrams, why are they any good?" There are a couple answers to that question. The first is, "TCP does that for you." TCP is the Transmission Control Protocol. It is in some ways similar to AX.25, in that it maintains an end-to-end connection between the sender and receiver, and guarantees eventual delivery of messages via acknowledgements, timeouts, and retries. It is also a "sliding window" protocol, which means that it can have more than one message unacknowledged at a time.

TCP wraps its messages up in IP datagrams and counts on IP to route them to their destinations. Programs almost never use IP directly; instead they use the simpler, more reliable interface TCP provides. This is one of the reasons that many people call the Internet Protocols "TCP/IP", since most of the time they are using a closely linked combination of both protocols. However, there are many more protocols in the Internet Suite besides TCP and IP, although all of them wrap their messages in IP datagrams, and many use TCP as well.

The second answer to that question about guaranteed delivery will let us introduce a few other protocols. That answer is, "You don't always want guaranteed delivery". That might seem like a silly statement: why wouldn't I want a message to get to its destination? The answer: we don't always know what the destination is! Consider calling CQ, for example. We broadcast a message asking for someone to talk to. Not everyone can hear us, but that's all right; we only need to get one answer. If we don't get an answer at first, we call CQ again until someone replies, or we decide the band is dead and go to bed. Yet, the CQ has fulfilled its purpose, and it would be silly to suggest that it should be replaced by a procedure in which I demand a yes-or-no answer to my request for a conversation from every station on the band.

Another example: I need to know if the local radio club is offering Novice classes, so I get on the local repeater and broadcast a request for information. Eventually someone who knows the answer replies. Like a CQ, I don't know who might answer; it is sufficient that someone does.

There are many "connectionless" protocols in the Internet world. Most of them are like our second case, broadcast requests for information we know someone might have, but we're not sure who that someone is. On the IP level, the Address Resolution Protocol (ARP) is used on many networks to discover which local network station corresponds to an IP address. On a higher level, UDP (User Datagram Protocol) forms the basis for many user services such as discovering the time of day.

Above these lower level protocols are the "user" protocols such as FTP (for file transfer), SMTP (for automatic mail delivery), Telnet (for remote login and conversation), NNTP (for bulletin board style news delivery), and so forth. These protocols all send their messages

through TCP connections.

Amateur Radio and TCP/IP

This all sounds pretty complicated, and it is. The good news, though, is that it's complicated like the telephone system: all that complexity goes to make life simple for the person who actually has to communicate using it. Like the touch-tone telephone, the TCP/IP software in use by radio amateurs is an easy-to-use port into a very powerful system.

Phil Karn, KA9Q, and many other volunteers have created a program called "NET", that runs on the IBM PC, Commodore Amiga, and Apple Macintosh Plus, SE, and II. NET is absolutely free for amateur use, and comes with documentation and source code. It supports keyboard-to-keyboard chatting and remote login via the Telnet protocol, as well as mail delivery and file transfer via FTP and SMTP, respectively. NET performs its own "multi-tasking": a user can be transferring a file and receiving mail at the same time he or she is holding a conversation. The software supports regular AX.25 conversations, too, so you can use it to call BBS's and chat with others who don't use TCP/IP (yet!).

TCP/IP is compatible with existing AX.25 users, and can coexist with the on the same channel if necessary. IP datagrams may pass through NET/ROM connections; we have plans in Wisconsin to share the NET/ROM backbone with regular AX.25 NET/ROM traffic.

What do you need to get on TCP/IP? To start with, you do need one of the computers listed above. You need a radio. You need a TNC. That's it. If your TNC is an AEA PK-232 or PK-87, a Heath HK-232, or a Kantronics with version 1.7 or higher firmware, you're set, otherwise you'll need to blow a "KISS" ROM for it. ROM code is supplied for the TNC-1 and TNC-2. The ROM for the TNC-2 is dual mode, so you can run your regular TAPR code or load the KISS code in. TAPR is now distributing the KISS ROMs, if you can't get them made locally.

Who is using TCP/IP in Wisconsin? Right now there are two core groups, one in Madison and one in Milwaukee, with a scattering of other stations in the Fox Valley. We have linked the two cities occasionally, and plan to do so permanently once the UHF backbone is in place. Most of the Madison stations are up 24 hours a day for mail and file transfers. We also have software for gatewaying mail between the PBBS's and TCP/IP, and plan to institute direct mail delivery soon in Madison and Milwaukee.

To obtain the NET package for the IBM PC, you can send five 360K or two 1.2 Mb. diskettes, along with a return mailer to:

Dan Frank W9NK, 1802 Keyes Avenue, Madison, WI 53711-2006

That includes the Amiga and Macintosh binaries on DOS format diskettes. We can produce PC 3.5 inch diskettes if necessary, as well as Macintosh diskettes, but that takes a bit longer. As of now, no one here is using the Amiga, so we can't provide native Amiga disks. We can also produce the KISS ROMs locally, although that should be a last resort.

If you have any questions, I can be reached via the W9WI-1 BBS. I also usually check in to the Wisconsin Packet Net on 3985 at 10 AM Saturdays.

We hope to see you soon on TCP/IP! 73, Dan

WNA Minutes (continued from page 4)

OLD BUSINESS: WB9ESM advised that the Braille Manuals have been delayed because of personnel reasons, but stated there has been progress with the Level I complete and others being worked on presently.

NEW BUSINESS: N9GJI stated that the Wisconsin Nets Association has fallen out of good graces with the Wisconsin State Department. It appears by a letter from them that necessary paperwork has not been filed to keep our non-profit corporate status current. Since we need to get current again, it is necessary to have a principal agent and a Board of Directors to fill state requirements. N9GJI, after discussion with Denny, entertained a motion to appoint Denny as Principal Agent to the State Dept. of Wisconsin. Motion passed. N9GJI entertained a motion that the Board of Directors shall consist of the WNA Chairman, WNA Treasurer, WNA Secretary, Section Manager (K9GDF), and three other appointed WNA members, WB9YPY, K9FHI, and W9YCV. A motion by K9ANV and seconded by N9BDL to approve the selection of Board of Directors as listed by N9GJI for an interim term until the next annual meeting (Sept. '88) at which time a formal amendment to the WNA Constitution can be made and a system to maintain this requirement can be established. Motion passed.

NEW BUSINESS: A motion by WB9ESM and seconded by K9FHI to authorize the prize committee (KA9RII) to spend \$50.00, amended to \$75.00, for the purchase of door prizes at the September 1988 Annual Meeting. Motion passed.

COMMENTS - K9UTQ: WCWTN needs a manager. Although it is not a WNA net, we would like to see it stay active.

K9UTQ asked members to give thought to a Novice/Technician 10 meter net.

K9UTQ: Gene requested some late net reports from various net managers so he can total the annual figures.

K9UTQ: Gene asked about interest in an RTTY net, packet radio net. No action taken.

K9UTQ: Gene asked if the WNA would like to sponsor one half the cost of the ARRL Operating Manual, the other half to be donated by BSSS, that will be given away to the winner of Gene's Trivia Contest that has been running in the BSSS during 1987.

NEW BUSINESS: After much discussion, a motion was made by WB9ESM and seconded by N9DGL to approve payment for one half of the prize of the ARRL Operating Manual to be given to the winner of the K9UTQ Trivia Contest. Passed by roll call vote with one no vote counted.

NET MANAGERS REPORTS

Traffic has been tapering down for the last couple of years.

WB9ICH/WIN/E: Always need NCS and 9RN reps.. Any help??

WB9YPY/BWN: Need WX reports from Madison area, Eau Claire and the Fox Valley.

WB9JSW/Bulletin Mgr.: There are 9 active Bulletin stations and noted the number of bulletins on Packet.

K9ANV/WSSN: Good November numbers and need Friday NCS.

W9NGP/WIN/L: Net is alive.. Thanks to all the faithful QNIs.

KA9RII/BEN: QNIs are up, QTC presented and passed are up.

N9DGL/WNN: Need NCS's to relieve the faithful N9BDL.

COMMENTS - WB9YPY: Jim questioned on-going conflict with WAR on our meeting dates. N9GJI stated he would like to talk to George Loudon about this matter and report back.

COMMENTS - N9BDL: Lee congratulated W9NGP on accepting position as WIN/L Manager and welcomed him to WNA.

COMMENT - N9DGL: The next scheduled on the air meeting of the WNA is scheduled for March 12th, 1988, at 1:00 p.m. on 3985 KHz, subject to change after discussion with WAR about meeting conflicts.

MOTION TO ADJOURN was made by K9FHI and seconded by NC9G. Motion passed and the meeting was adjourned at 2:40 p.m. by WNA Chairman N9GJI.

=====

PK-FAX FOR IBM COMPATS

AEA is about to announce the release of their new "PKFAX" (tm) program for IBM PCs and true MS-DOS compatibles. The new "PK-FAX" program permits the user of AEA's PK-232 controllers to receive and display weather and radiofacsimile pictures directly to the computer's video monitor or display device, save the pictures to disk, and transmit pictures from the disk files created by "PK-FAX", or by one of the available "Paintbrush" programs.

The "PK-FAX" program requires:

An IBM Personal Computer or close compatible
256K memory
Two floppy disk drives, or one floppy disk drive and a hard disk
A video graphics adapter and display
DOS 2.0 or above
A serial port
An AEA PK-232 or Heathkit HK-232 data controller
A serial cable capable of 4800 baud operation (included with PK-232)
A radio receiver capable of tuning facsimile frequencies.

"PK-FAX"'s usefulness is enhanced with:

A dot-matrix printer capable of bit graphics
A parallel port
A Paintbrush program
A radio transmitter

A typical "PK-FAX" configuration menu looks like this:

| | |
|-----------------------------|-----------|
| A. PK-232 serial port | COM1 |
| B. Printer port | Parallel |
| C. Serial printer baud rate | 1200 |
| D. Serial printer parity | None |
| E. Printer data bits | 8 |
| F. Printer type | Epson |
| G. Printer graphics density | 120 dpi |
| H. Printer status method | BIOS 23 |
| I. Video adapter | Automatic |
| J. Transmit Morse ID | No |
| K. Callsign for Morse ID | PKFAX |
| L. Next auto-save disk file | (none) |
| M. Auto-save start time | 12:00 |
| N. Auto-save stop time | 12:00 |

"PK-FAX" operates with the following printer types:

- Epson
- IBM
- Radio Shack
- Apple "G"
- Apple "S"
- Okidata 82/83 w/ Okigraph I; 92/93
- Okidata 192, 193
- Star Gemini
- Star Micronics
- GX-100, Gorilla Banana
- Texas Instruments
- Genicom
- Miscellaneous
- NEC.

"PK-FAX" permits configuration with the following video graphics adapters:

- Automatically selected
- Hercules monochrome adapter, page 0
- Hercules monochrome adapter, page 1
- IBM Color Graphics Adapter (CGA)
- IBM Enhanced Graphics Adapter (EGA)
- IBM EGA with monochrome monitor.

"PK-FAX" saves pictures to disk in a file format compatible with "Paintbrush" programs, including PC Paintbrush (ZSoft Corporation), Logipaint Set (Logitech, Inc.) and Microsoft Paintbrush (Microsoft Corporation).

You can create your own pictures with a "Paintbrush"-type program and save them to disk. As long as your homebrew pictures are in black and white, they are compatible with "PK-FAX" and you can read them into a buffer and then transmit your own pictures over the radio.

AEA has included a FRAME program on the "PK-FAX" disk to process the picture after "PK-FAX" has saved it, but before you use your Paintbrush program. FRAME is a program that pre-processes FAX pictures so that the resulting pictures are much more convenient to manipulate in Paintbrush. FRAME is not required between Paintbrush and "PK-FAX", as "PK-FAX" itself takes care of the re-sizing.

FRAME features include:

- Processing pictures so the proportions are correct on EGA and Hercules video adapters.
- Re-sizing pictures so they take up no more than a full screen, or a portion of a screen.
- Rotating pictures clockwise or counter-clockwise.
- Turning pictures upside-down.

"PK-FAX" also provides an "Auto-save" feature that permits you to save every picture that you receive and saves pictures to disk automatically, with sequential file names, starting and ending at times you select.

AEA will start delivering "PK-FAX" to authorized AEA dealers in early December.

=====

BSSS would like to receive information about any area "200" stations. We would like to receive schedules, QSL information, and any other information of interest. We plan on featuring these stations in the next issue of BSSS.

Yellow Thunder**Amateur****Radio****Club****K9ODK
WB9FDZ**

The next meeting of the Yellow Thunder Amateur Radio Club will be held on Thursday, April 14, 1988 in room 25 of the Baraboo Civic Center, Baraboo, WI. The scheduled program will be an ARRL slide presentation on Field Day.

ATTENDANCE - MARCH 16, 1988

Steve Schwoegler, WB9RNL, Wisconsin Dells
Duane Grotphorst, KA9HKL, Loganville
Harry Westlund, K9EHJ, Baraboo
Jim Decker, WB9UQT, Baraboo
Gary Muskat, N9DRA, Middleton (Guest)
Clyde Downing, W9HSY, Madison
(Guest - MARA President)

Brian Schell, Baraboo (Guest)
Ken Johnson, K9DZG, Mazomanie
Steve Polishinski, WB9YSD, Sun Prairie (Guest)
Jim Romelfanger, K9ZZ, Baraboo
Mark Ferguson, KA9WSN, Madison (Guest)
Harry Mayland, K9FFT, Baraboo
Bill Klinkner, Sauk City
Anne Klinkner, Sauk City
Art Kleerisch, W9WSS, Baraboo
Ken Ebnetter, K9EN, Portage

The March 16, 1988 meeting of the Y.T.A.R.C. was called to order by President Steve Schwoegler at 7:35 p.m.

The minutes of the last meeting were approved as published in the B.S.S.S.

The Treasurer reported finances as: operating balance, \$303.85; total balance, \$335.79.

The Secretary read a bulletin from the "Foundation for Amateur Radio Scholarships" and a letter from the Badger State Smoke Signals announcing new subscription and ad rates. Ken Ebnetter then passed around several bulletins for the members' reading.

The A.R.R.L. slide program on "Field Day" scheduled for tonight had to be cancelled. League Headquarters notified us the last club to use this program ruined the audio tape and it could not be repaired in time for this evening. This program will be rescheduled for our next meeting on April 14, 1988.

The winner of Buck Nite was Gary Pratt,

WB9ECO, who was not present. (Editor's note: See page 15.) Next month will be \$12.00.

With this, the business of the meeting was adjourned at 7:55 p.m.

At this point, the floor was turned over to our guests for the evening: Gary Muskat, N9DRA, Middleton; Clyde Downing, W9HSY, Madison; Steve Polishinski, WB9YSD, Sun Prairie; and Mark Ferguson, KA9WSN. All participated in a slide show presentation (in living color) of the M.A.R.A. repeater installations in Madison, all with suitable commentary. On behalf of the club, we thank our guests for a most enjoyable program.

Respectfully submitted:
Harry Westlund, K9EHJ, Secretary

YTARC BIRTHDAY

Bennie Ranum WB9QQG April 23
William Klinkner April 27

SENTENCE SERMON

All that we send into the lives of others comes back into our own.

--Edwin Markham

In keeping with the theme of this issue of BSSS, we present the following items of interest:

From The GEARVAKF Bulletin**TUBE VERSION OF COMMODORE C-64 OFFERED**

In a special news release issued the day before yesterday, the Gronitor Electronics Corp., announced it would begin marketing a tube-type version of the famed Commodore 64 personal home computer. The all-tube computer was developed over the past five years with the help of a grant from the Traditionalist Radio Amateur Program (TRAP), a group of Amateurs who do not believe in solid state devices. Gronitor expects to sell the computer to "people who don't understand microchips." The new computer is expected to use lots of power and help keep the homes of buyers warm in the winter. The tube-type C-64 is expected to be available in the spring as soon as licensing arrangements can be completed.

AMATEURS ABSOLVED OF BLAME FOR KERCHUNKING

It has been reported that there has been an increase recently in the number of unexplained signals on the Amateur bands in recent years. These signals often cause momentary keyups of repeaters. Amateurs have been blamed for these

signals, kerchunking repeaters so that they can hear the noise burst or the repeater id. This is certainly a falsehood as all Amateurs obey FCC rules and would not make an unidentified transmission. However, while research has eliminated most other causes, it has been noticed that the increase in unexplained signals has coincided with the increase in Packet Radio activity.

When two packets arrive at a receiver at the same time, they collide and their packets get mixed up. Since the addresses are now mixed up, the TNCs reject the packets and they are not accepted. In addition to the addresses being scrambled, they are often knocked off frequency, and they will then drift around looking for a packet receiver that will accept them. Since no receiver with a TNC will accept them, they continue to wander around the bands and eventually, they run across an open repeater that does not require an accurate address as does a TNC. So when you hear the local repeater being kerchunked, do not blame Amateurs for something they would not think of doing, it probably is just a lonely packet looking for a comfortable home.

SOLUTION OFFERED FOR LOST PACKETS

As a solution to the problem of lost packets kerchunking receivers, it is recommended that all Amateurs obtain an older (1930-1940) model receiver and leave it on at all times. These older receivers with their wide-bandwidth make excellent receptors for these lost packets. If you cannot find a suitable receiver, most older issues of the ARRL Handbook have articles on building a regenerative receiver. Parts should be ordered from any 1949 or earlier Allied Radio Catalogue. If you operate more than one band, a separate receiver for each band will be required. Be sure to operate all receivers with speakers at full volume so that the front ends do not get plugged up with packets. They must have room to get through, and earphones have not proven suitable as they do not have sufficient output.

It is suggested that these lost packets then be placed in plastic bags and put out with the regular weekly garbage pickup. Since this has the disadvantage of rapidly filling up local landfill sites, a better solution is to purchase a Cray VI Super Computer, and replace all of its memory with Write Only Memory (WOM). This should be possible for no more than a few million dollars per Amateur, saving your local community the need to build a new landfill next to your shack.

LOST PACKETS CREATE HAVOC ON HF

In addition to the problems on the VHF bands, lost packets have been showing up on the 20 meter band. The wandering packets have been mistaken for Woodpecker, Fax, RTTY, AMTOR, CW, and even SSB signals. One packet was so distorted that 325 SSBers worked it thinking it was a new country, and the ARRL announced that verification of the license had been received at the W1AW BBS and they would recognize it as soon as cards were submitted. Some of these lost packets have been contributing to recent flare ups in the 10 year old 20-meter band fire which was thought to have been extinguished. Ralph R. Spiffie, an FCC spokesperson said that this is not expected to be serious as it has affected only contest and DX operations. Business and other commercial traffic on 20 meters should be able to continue as usual. --ex K9GSC

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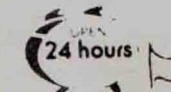
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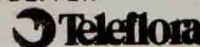
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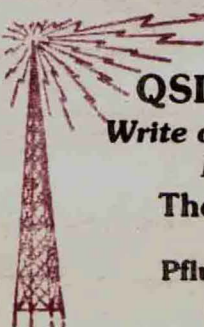
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